S1735-1 a(1)

Economic Report of the Governor 1981—1982

Bob Graham
Governor
State of Florida
April 1982

This public document was promulgated at an annual cost of $2,449.00 for printing and $72.00 for art production, or $.84 per copy, to present to the people and the legislature of this state a review of and outlook for the Florida economy, in accordance with Chapter 23.015, Florida Statutes.

STATE OF FLORIDA

Office of the Governor

THE CAPITOL

TALLAHASSEE 32301

BOB GRAHAM
GOVERNOR

April 30, 1982

Honorable President and
Members of the Senate

Honorable Speaker and
Members of the House
of Representatives

Honored Members:

In accordance with Section 23.015, Florida Statutes, I am transmitting to you and the people of Florida a report on the economic status and outlook for the State. This report gives a review of the State's economic performance during the seventies and provides a forecast for the current decade.

This report is prepared by the State Economist and his staff. The forecast of economic activity and the analysis of the underlying forces of the Florida economy which are presented in this report should provide valuable assistance to members of the Legislature, government officials, and the business community of the State.

Comments and suggestions from readers will be appreciated and will be considered in the development of future economic reports.

With kind regards,

Sincerely,

Bob Graham

Governor

BG/rrp

An Affirmative Action/Equal Opportunity Employer

STATE OF FLORIDA

Office of the Governor

THE CAPITOL
TALLAHASSEE 32301

BOB GRAHAM
GOVERNOR

April 23, 1982

Honorable Bob Graham
Governor
The Capitol
Tallahassee, Florida 32301

Dear Governor Graham:

The Revenue and Economic Analysis Unit of the Office of Planning and Budgeting is pleased to submit to you this report on the status and outlook for Florida's economy. The report reviews the State's economic performance in the seventies and provides a trend forecast for the eighties. It emphasizes the factors that will contribute to growth, and the implications of economic development on both the standard of living of Florida's residents and the decisions that must be made by State Government.

This year's report benefited from the efforts of many. The State's Department of Commerce provided the section on Investment and Economic Growth. The Department of Environmental Regulation and the Royal Canadian Bank of Miami also contributed extensively to portions of this report. We particularly wish to express our appreciation to these individuals.

Sincerely,

John T. Herndon

John T. Herndon, Director
Office of Planning
and Budgeting

JTH/ap

An Affirmative Action/Equal Opportunity Employer

TABLE OF CONTENTS

	Page
THE FLORIDA ECONOMY	1
Florida in the Seventies	
Florida's Prospects for the Eighties	
CONSTRUCTION	7
The Changing Financing Environment	
The Construction Outlook	
INVESTMENT AND ECONOMIC DEVELOPMENT	13
National Investment Trends	
Florida Investment Trends	
Factors Responsible for Florida's Strong Growth Performance	
Key Industries in Florida's Development Future	
Government Involvement in the Development Process	
INTERNATIONAL TRADE AND FINANCE	29
International Trade	
International Banking	
TOURISM	35
FLORIDA'S ECONOMIC GROWTH AND THE ENVIRONMENT	39
Water Use and Contamination	
Industrial Waste	
Impact of Environmental Deterioration on Growth	
The State's Effort in Protecting Florida's Environment	
The Effects of the Reagan Budget Cuts	

LIST OF TABLES

Table		Page
1	Florida Population Trends 1970-1990	1
2	Florida Personal Income	2
3	Florida Construction Activity	8
4	National Economic Forecast	14
5	Florida Employment by Sector	18
6	Florida's International Trade, 1970-1980	30
7	The Structure of Florida's Imports, by Customs Districts, 1979	31
8	The Structure of Florida's Exports, by Customs Districts, 1979	31
9	Tourist Arrivals by Mode of Travel	36
10	Fresh Water Use in Florida	41
11	Hazardous Waste Generation 1980-1990	44

INTRODUCTION

The seventies was a period of great turbulence in the Florida economy. During this period, explosive growth and severe recession as well as the unsettling effects of deregulation in the financial markets were experienced. Each of these major events, as well as a myriad of smaller ones, has shared in molding the economic development environment that now exists. This report will examine some of the key economic events of the seventies and show how they have affected growth prospects and what the future effects are likely to be.

As much as its amenity resources, Florida's investment opportunities and favorable business climate have been responsible for the growth experienced in the last decade. For Florida to continue strong growth through the eighties, it will be necessary for it to retain its comparative advantage over other states in attracting investment funds. Indications are that Florida will indeed remain competitive throughout the decade.

In its annual survey in 1981, Alexander Grant & Company found that Florida ranked number one among the states as a desirable place to do business. The survey evaluates nearly two dozen factors considered to be important by manufacturing concerns in making location decisions. As the more important of these factors are examined, there are few reasons to believe that Florida will lose its competitive advantage in the next decade. There is a foundation on which to build strong, continuing economic development and diversification.

Because of the importance of amenities--both natural and manmade--to the continued desirability of Florida as a place to live and invest, maintenance of these amenities in the face of rapid growth becomes a pressing problem. With the possibility of a New Federalism evolving, which will shift more responsibility for this maintenance away from the federal level, it becomes more important to examine this important cost to economic growth. Growth and shifting responsibility will strain the system's ability to provide adequate roads, clean water and all the other necessary public goods. Economic growth and the high quality of life Floridians have come to expect are not incompatible, but conflicts inevitably occur. Intelligent planning and action now will help insure the accomplishment of both goals. These points of conflict and the steps the State is taking to overcome them are discussed in this report.

THE FLORIDA ECONOMY

Rapidly increasing population and a large expansion in tourism and other service related industries helped make Florida's economy one of the fastest growing in the Nation during the seventies. The State's climate, recreational facilities and relatively low cost of living contributed to lure visitors and residents in record numbers. Between 1970 and 1980, Florida's population grew by 43.4 percent, an increase of nearly three million. This rate of growth was surpassed only by Nevada and Arizona, both of which have much smaller populations. Tourist arrivals rose from 18.6 million in 1970 to 32.5 million in 1980. Many businesses decided to relocate in the State as well, hoping to gain access to the burgeoning regional market. Low costs and a favorable business climate also provided incentives. These large influxes of businesses and people over the last decade propelled Florida from an economy based on tourists and citrus fruits to one of considerable diversity and importance. As a consequence, Floridians have substantially increased their standard of living over the decade.

TABLE ONE
FLORIDA POPULATION TRENDS
1970-1990

Category	1981 Category Total	1981 Percent of Total	Average Annual Growth Rates 70-80	80-85	85-90
		%	%	%	%
Total Population	10,173.9*	100.0	3.69	2.57	2.66
Ages 0-17	2,533.3*	24.9	1.36	3.14	-.89
Ages 18-.4	3,733.8*	36.7	4.84	2.94	1.95
Ages 45-64	2,075.5*	20.4	3.20	1.35	3.08
Ages 65 and older	1,831.3*	18.0	5.96	2.34	7.87
Households	3,968.3*	NA	5.27	3.76	4.09
Average Household Size	2.56	NA	-1.50	-1.11	-1.43

*Thousands of persons or households.

Source: Executive Office of the Governor and Bureau of Economic and Business Research, University of Florida.

Florida in the Seventies

The most aggregate measure of economic well-being in the State, real personal income, grew at an average annual rate of 13 percent from 1971 to 1980. Wages and salaries, the largest category within this measure, grew somewhat sluggishly due to the

---

TABLE TWO
FLORIDA PERSONAL INCOME
Average Annual Rate of Change

	1970-1975	1975-1980	1970-1980
	%	%	%
Total Florida Personal Income	12.99	13.05	13.02
Private Nonfarm Wages and Sal.	10.63	13.33	11.97
Farm Wages and Salaries	7.22	13.80	10.46
Government Wages and Salaries	12.47	7.66	10.04
Other Labor Income	18.53	18.27	18.40
Property Income	14.19	15.53	14.85
Transfer Payments	21.47	12.63	16.97
Farm Proprietors' Income	13.83	6.70	10.21
Nonfarm Proprietors' Income	4.19	12.82	8.42
Social Security Contributions	11.59	13.98	12.78
Real Personal Income	6.38	5.25	5.81
Per Capita Personal Income	8.08	10.10	9.08
Real Per Capita Personal Income	1.75	2.50	2.12

	1980-1985	1985-1990	1980-1990
	%	%	%
Total Florida Personal Income	12.35	11.40	11.87
Private Nonfarm Wages and Sal.	13.23	13.28	13.26
Farm Wages and Salaries	11.98	9.65	10.81
Government Wages and Salaries	8.83	6.82	7.82
Other Labor Income	14.84	13.55	14.19
Property Income	12.58	8.41	10.48
Transfer Payments	12.38	11.04	11.71
Farm Proprietors' Income	-.57	4.85	2.10
Nonfarm Proprietors' Income	10.94	13.21	12.07
Social Security Contributions	15.02	12.54	13.77
Real Personal Income	4.53	5.21	4.87
Per Capita Personal Income	9.54	8.51	9.02
Real Per Capita Personal Income	1.92	2.48	2.20

Source: Executive Office of the Governor and U.S. Department of Commerce.

---

poor performance of real wage rates, which declined about 0.5 percent a year over the decade. Most of the growth was in three categories: other labor income, property income and transfer payments. Other labor income--essentially fringe benefits--has become an increasingly important part of wage settlements, growing faster than any other category of personal income. These become more popular after wages pass a certain level and progressive income taxes begin taking a sizeable portion of wage and salary increases. Property income--dividends, interest and rent--grew at an average annual rate of almost 15 percent. The high interest rates of the last few years have contributed to interest income growth. Finally, transfer payments, which are primarily Federal Government income redistribution payments, have grown tremendously in scope and extent in the last decade and a half. In Florida, the impact has been even larger because of the high and growing percentage of the elderly, who are beneficiaries of many of these programs.

Although Florida personal income as a share of total national personal income grew during the seventies (going from 3.1 percent to 3.9 percent), on a per capita basis the gap between the Nation and State widened slightly. In each major income category, the national per capita growth outpaced Florida's. In 1970, the average Floridian earned 92.6 percent of what the average worker did nationwide; by 1980 this gap widened to 90.6 percent. There are several reasons for this result. Florida has a large retirement age population and much of what they spend does not come out of current income, but from savings which were counted as income in prior periods. Additionally, because of the State's industrial mix, with a preponderance of trade and service jobs and low level of unionism, wages have been low and slow to increase. Another complicating factor is what has come to be known as the underground economy. A great deal of money is earned each year that is not reported to tax authorities and never gets into the national income accounts. This money may be from legal activities such as tips, self-employed people working on a cash only basis, or illicit activities such as the drug trade. It has been estimated that these unreported activities account for as much as 10 to 20 percent of GNP. By its nature, this is a hard activity to measure, but it is likely that Florida has more than its share of the problem. The large trade and service industries are well suited to cash transactions, as are the extensive drug smuggling and related activities in the State. In addition, the large elderly population has the incentive to under-report earnings to maintain social security benefits.

Although the per capita personal income figures show Florida lagging behind the U.S., the picture is not complete. A better statistic for comparing economic well-being would be one which more accurately measures purchasing power. Correction should be made for differences in tax burden and cost of living across states. Spatial price indices comparing the states are

hard to come by, but some recent work in the area suggests that the range of purchasing power is much narrower than that of per capita income; those states with higher per capita income don't necessarily have more purchasing power. For example, a study using 1978 data showed Florida ranked 25th in per capita income at 97 percent of the U.S. average. After adjusting for taxes and living costs, Florida was 6th at 109 percent of the U.S. average. This means that Floridians enjoyed a better standard of living than most persons--the highest in the South--and thus provided a strong market for consumer goods as well as a wage cost advantage for businesses thinking of relocating.

The pattern of Florida's economic growth followed, to an exaggerated degree, the national economy with periods of strong gains at the beginning and at the end of the decade with a severe economic slowdown in the middle. The decade began with Florida's economy feeling little of the impact of the 1969-70 national recession. The State's economy was sustained by a continuation of the steady in-migration of 150-200 thousand persons a year experienced throughout the late sixties. The unemployment rate was a percentage point lower than the national average. As interest rates eased and the Nation's economy resumed growth, the flow of in-migrants became a flood, reaching nearly 500,000 a year by 1974. Tourism showed large gains as well. Encouraged by higher levels of national income and ample supplies of low priced gasoline, tourists came to the State in ever-increasing numbers; the average annual rate of growth in arrivals from 1971 to 1973 was 8.3 percent.

Such a large influx of people, combined with a favorable financial market, high consumer optimism and a great deal of speculation by builders, created an enormous construction boom. Housing starts easily surpassed previous records--a total of over 510,000 housing units were started between the beginning of 1972 and the end of 1973. Non-residential construction went through a similar surge. Real personal income, boosted especially by construction expenditures and employment, grew at annual rates of over 10 percent in both 1972 and 1973. Real per capita income averaged 5.2 percent annual growth for 1971-73 while employment, helped along substantially by construction employment, averaged a very healthy 8.9 percent rate of growth over the same years. The unemployment rate fell to 4.3 percent in 1973, lower than the national rate of 4.9 percent. The economic boom tended to feed on itself, further attracting migrants from out-of-state.

Beginning in 1974, a national recession and the Arab oil embargo combined to bring the boom to an end. Although the recession hit Florida later than it did the rest of the Nation, its impact was much greater. This was primarily due to the effect it had on two of the State's major industries: tourism and construction. The recession-induced slowdown in national personal income and the increased gasoline prices and shortages kept

tourists at home and tourist arrivals fell 2.4 percent in 1974. The construction industry was also dealt a devastating blow. During the boom preceeding the recession, a large portion of the building being done was speculative in nature. Housing production had increased at an even faster rate than population growth. With mortgage rates reaching a then unprecedented 9.1 percent, housing demand slackened. The outbreak of the recession left builders with huge inventories of unsold homes and many were left financially insolvent. Housing starts fell to 133,000 in 1974 and 52,500 in 1975, down to less than a quarter of their previous peak levels.

The impact of the recession on the rest of the economy was severe also. Florida's population growth, while continuing to grow at a strong 5.3 percent pace in 1974, slowed to 3.4 percent in 1975 and finally to only 1.5 percent in 1976. Employment growth reacted a year earlier. It slowed to 3.1 percent growth in 1974, declined by 4.1 percent in 1975, and finally turned around in 1976, growing by 1.4 percent. Particularly hard hit was construction employment, which declined for three years, ending up 123,000 down from its 1973 peak of 290,000. The unemployment rate peaked at 10.7 percent, compared to a peak for the Nation of only 8.5 percent. Real per capita personal income declined substantially in 1974 and 1975, and began growing slowly in 1976, with wages, salaries and proprietors' income feeling the most impact.

It was not until 1977 that Florida showed a strong recovery from the recession. After the slowdown in 1974, tourists continued to arrive in above average numbers until the dramatic gasoline price increases beginning in 1979. These price increases, in tandem with the national economic downturn of 1980, resulted in no growth in numbers of tourists for 1979 and 1980. In contrast to tourism, population growth recovered somewhat more slowly, never reaching the level of growth experienced during the first half of the seventies. Recovery in construction activity lagged accordingly, with the level of starts remaining between 150 and 200 thousand for the last three years of the decade.

The 1974 recession experience also demonstrated that the Florida economy was very vulnerable to swings in construction activity. The high level of speculation accentuated the peak and significantly lengthened the trough. Much of this was due to a growth euphoria fed by increasingly easy credit. In the subsequent expansion, the boom in speculative housing did not reoccur to the same extent in most areas. Builders tended to carry much lower inventories, in large part at the behest of financial institutions. In spite of the reduction in speculation, the unprecedented high interest rates experienced since late 1979 have taken their toll. During the credit crunch and recession of the second quarter of 1980, construction employment fell at an annual rate of 6.2 percent, with construction expenditures falling at a 2.4 percent rate.

Florida's Prospects for the Eighties

The recession of 1980 was deep but short. The economy recovered in the last half of 1980, but rising interest rates brought about yet another national recession in 1981. Recovery from the 1981-82 recession is still being threatened by an unprecedented high real rate of interest. The housing industry in Florida is experiencing the biggest slump since the 1974-75 recession. Private housing starts fell at an annual rate of 66.7 percent during the last quarter of 1981, not far from the record decline of 76.6 percent during the fourth quarter of 1974.

Interest rates, however, are forecast to ease downward in the near future, setting the stage for an economic recovery starting by mid-summer. The rest of the decade is anticipated to be one of modest growth with the economy adjusting to the new environment of low inflation rates and deregulated financial and commodity markets.

Real personal income in Florida is projected to grow at an average annual rate of 4.5 percent in the first half of the decade, while the second half of the decade is expected to experience a slightly higher rate of growth, 5.2 percent. In real per capita terms, the annual growth rate in personal income is expected to be 2.2 percent, compared to the 2.1 percent rate experienced during the 1970's. Population will increase by the same amount it did during the last decade, 3.0 million.

While many of the new residents will be retirees, most will join the labor force. In the seventies for every 100 new residents, 46 jobs were created, while in the eighties, 74 jobs are expected. This reflects the maturing of the State's economy. Increasingly, Florida is becoming recognized as an attractive business location as well as a place to vacation or retire. There are many facets to Florida's appeal and these are discussed in detail later in this report. The traditional appeal of Florida still continues to be strong. There is expected to be an increase of 1.2 million in retirement age population in the decade. Additionally, tourist arrivals will grow at an average annual rate of 4.1 percent in the eighties, so that by 1990 Florida will be playing host to over 48 million visitors annually.

Economic growth will have its negative aspects, however. A larger population and a more industrialized economy will require greater expenditures to develop supporting infrastructure, such as additional roads, schools and sewage treatment plants. Expenditures towards the preservation of the State's fragile natural environment will also be required.

CONSTRUCTION

Residential construction is by its nature a very volatile industry. During the seventies, the industry's fortunes were tied to the business cycle, as well as to government regulation and monetary policy. Much of the volatility comes from the speculative nature of the industry, particularly in Florida. Florida has historically experienced high population growth, giving rise to a continuing, high demand for new housing units. The structure of the industry, with its multitude of small contractors, leads to poor information on the actual levels of in-migration and almost inevitably to speculation. When in-migration reached unprecedented heights in the early seventies, so did speculation. Fueled by easy financing and moderate interest rates, construction flourished, especially in the South Florida region where multi-family housing was particularly popular. Construction activity peaked in 1973; from there a combination of several factors led to a near collapse of the housing market. Slow population growth --the consequence of a national recession fueled by energy problems--plus high interest rates and unavailability of funds drastically slowed construction. It became apparent that there was a serious oversupply of condominiums in South Florida. It took several years to work off this surplus, and during this time the annual value of multi-family housing starts plummeted to less than 10 percent of its peak value in real dollars.

The importance of multi-family units in Florida and their potential for speculation have added to the volatility of the industry. Because it is difficult to build condominiums only as they are sold, they inevitably involve some speculation by the builder or developer. Many of the preconstruction sales may be purely speculative in nature. A small down payment or binder is put on the unit, but the "buyer" of the unit has no intention of completing the transaction. Instead, he hopes to resell the units at a profit as the building nears completion. If the market proves unfavorable, the speculator can simply walk away leaving the developer with a large, unanticipated inventory on hand.

While multi-family starts accounted for 35 percent of U.S. starts in the seventies, in Florida they accounted for 56 percent. In the peak year of 1973, Florida multi-family units were 76 percent of Florida starts, and a startling 22 percent of U.S. multi-family starts. Florida single-family starts by contrast accounted for only 6 percent of the U.S. total. The importance of multi-family units is due to several factors. First, a large part of this group is condominiums, which are ideally suited for second homes or investments for rental and speculation. In many

coastal counties, most starts are condominiums. This type of lifestyle is also well suited to retirees, as their space requirments are typically modest and condominiums tend to require less upkeep than single-family homes.

TABLE THREE
FLORIDA CONSTRUCTION ACTIVITY
Average Annual Rate of Change

	1970-1975	1975-1980	1970-1980
Private Housing Starts(Thou.)*	170.29	142.04	156.16
Private Housing Expenditures	5.87%	20.77%	13.07%
Other Private Constr. Expend.	7.86	19.92	13.73
Total Private Constr. Expend.	6.48	20.50	13.27
Total Public Constr. Expend.	15.21	10.85	13.01
Total Construction Expenditures	8.32	18.36	13.23

	1980-1985	1985-1990	1980-1990
Private Housing Starts(Thou.)*	171.90	240.97	206.43
Private Housing Expenditures	4.69%	13.91%	9.20%
Other Private Constr. Expend.	13.23	8.96	11.08
Total Private Constr. Expend.	7.65	12.03	9.82
Total Public Constr. Expend.	9.22	5.26	7.22
Total Construction Expenditures	7.94	10.85	9.39

* Average annual number of starts.

Source: Executive Office of the Governor and F. W. Dodge Company.

The Changing Financing Environment

The speculation of the early seventies was aided by the emergence of the Real Estate Investment Trusts (REITS). REITS used short-term borrowing to finance mortgages, construction loans and real estate acquisitions. Money from shareholders and bank loans was channeled through the REITS to eager contractors in unprecedented amounts. By enthusiastically supplementing and even replacing banks as providers of short-term construction loans, the REITS contributed to the rapid expansion in housing during the 1972-73 boom period. This overleveraged situation soon resulted

in a large excess of condominiums and apartments, especially in South Florida. The bubble burst in the midst of the credit shortage occasioned by the disintermediation occurring in the Nation's banks and thrift institutions. The resulting collapse of the residential construction industry led to the near demise of the REITS and substantial losses for banks and shareholders. Many outstanding loans to builders from the REITS were on projects that were ill-conceived and highly dependent on a feverish real estate market. As the market slumped and office and condominium units went unsold, builders were unable to repay their loans. With no other funds readily available to builders, many projects were halted in midcompletion, some remaining so for several years. As a result of these problems, the subsequent expansion proceeded at a more rational pace, with financial institutions taking a more active, critical role in providing construction capital.

More recent problems in the housing industry have come from a different source, however. While the earlier booms were halted by a tightening in the money markets that cut off the availability of funds, the current problem is one of price, not availability. This has been the result of fundamental changes in the functions of financial markets and institutions that took place during the last half of the decade. These changes involved the emergence of a number of innovative financial instruments that circumvented reserve requirements and interest regulations, as well as the eventual trend towards deregulation of financial markets and institutions.

Most of the financial regulations in effect in the early seventies were passed during the depression years. They were an attempt to protect the banking sector from insolvency by promoting prudent behavior in institutions and individual participants. These regulations took the form of reserve requirements, interest rate ceilings and limitations on the type of service provided by any given institution. Furthermore, usury laws were passed by many states to protect consumers from unduly high interest rates. These regulations, together with the conservative nature of money market participants who still had fresh memories of the financial disasters of the depression years, helped assure little interest rate fluctuation during the fifties and early sixties. Interest rates remained low and business steadily expanded.

During subsequent business expansions, however, loan demand and interest rates pushed against regulated ceiling and reserve provisions. Financial institutions started to look for ways to circumvent regulations. A number of financial innovations followed. Among these were the emergence of the Eurodollar market, certificates of deposit, money market funds and the emergence during the seventies of the REITS. With these innovations, the financial markets extended their ability to finance business expansions. Funds were made available, but at higher rates. However, the high interest rates had a negative impact on those

institutions that remained heavily regulated, particularly the thrift institutions. As interest rates rose above regulated ceilings, the thrifts began experiencing withdrawal of funds. Savers moved these funds to Treasury Bills and other higher yielding instruments. With the reduction of new funds available to the thrifts, mortgages were curtailed and the construction industry suffered.

To help reduce these withdrawals and make the financial system more competitive, Congress began a gradual process of deregulation. In 1979 and 1980 banks and thrift institutions were authorized to offer Money Market and Small Savers Certificates. These proved very popular among investors and quickly made up 40 percent of deposits. Disintermediation is no longer a major problem, as interest rates competitive with Treasury Bills are now available in the banking and thrift systems. At the same time that the deregulation in financial markets was taking place, the Federal Reserve introduced its New Monetary Policy (NMP), shifting its emphasis from controlling interest rates to stabilizing monetary aggregates. As a result, interest rates have been left to respond to market pressures. With the Fed now pursuing non-inflationary monetary growth targets, interest rates have risen to unprecedented levels. Funds have been available but at a high cost. Mortgage rates have gone up with the rest of the interest rates, often precipitously. Lenders, squeezed by high rates on new short-term funds on the one hand and portfolios of low-yield mortgages on the other, are only willing to offer fixed-rate mortgages at rates that few borrowers can accept. Consumers are thus having to pay for their new high return on savings through the loss of subsidized borrowing rates.

The Construction Outlook

The NMP and the deregulated financial environment will have some far reaching impacts on the housing industry, both nationwide and in Florida. Since borrowers are now paying much closer to the true cost of financing a house, fewer families can qualify for home mortgages. This has a dampening effect on mobility, as well as on growth in home ownership.

However, these need not be the final, long-term results of the new financing environment. Consumers will react to the higher financing cost in a variety of ways, which will tend to reduce the cost of housing. One that has already started taking place is the use of "creative financing". In its most common form, this involves retaining the original favorable financing and having the seller provide a second mortgage--at a low interest rate--for most of the remaining equity. This gives the buyer affordable financing which is subsidized by the seller. The net impact is to lower the selling price of the house, thus reducing the seller's equity. These first round sellers--second round buyers--will have

less cash available when they enter the market as buyers, putting further downward pressure on prices. Another innovation has been the development of variable rate mortgages that place the risk of interest rate escalation on the borrower rather than the lender. Because of this added risk, the result will also be lower home prices.

The answer for some will be to buy less expensive alternatives, such as manufactured housing, or multi-family arrangements, such as condominiums or townhouses. For others, the solution will be to rent. As a result of new market rate financing, home ownership often loses its appeal as an inflation hedge and tax shelter, and renting can be a cheaper alternative.

In the eighties, it is likely that we shall see a continuation of the importance of multi-family construction, both for ownership and rental. Single-family houses will still be important, but they may be built smaller and with fewer amenities in an attempt to lower costs enough to attract buyers. While recovering from current lows, housing starts are not expected to be greater in numbers than they were in the previous decade.

In Florida, the key demographic consideration is that households are expected to grow at an annual rate of 3.9 percent. Starts will accommodate this growth, averaging 206 thousand a year. The strong household growth will be due primarily to a strong influx of new residents, a continuation of the pattern of the sixties and seventies. Thus, much of Florida's housing demand will not be discretionary; people moving here will need a place to stay, so housing will be built. In addition, a significant portion of the market is immune from the problems of the mortgage market. Many individuals have substantial cash available, either from the selling of a previous home, the underground economy, or money fleeing other countries, usually Latin American. For these people, interest rates are a minor concern. Thus, Florida, like other growth states, will continue to experience substantial growth in the construction industry in spite of the new, less favorable financing arrangements. Interest rates, although declining over the decade, will still remain high by historical standards. In 1970, the median price of a new house for the U.S. was $23,533; by 1980 this had risen to $64,850 and in 1990 it is expected to be $127,684. It is likely that as housing payment growth outstrips income growth, as desirable locations become scarce, and as household size continues to decline, the emphasis in Florida will be more and more on multi-family units.

INVESTMENT AND ECONOMIC DEVELOPMENT

There are two principal factors that determine the levels of investment and economic growth in a state. First, the total amount of investment that will be carried out in any state is dependent on the Nation's economic health. No state or region is an island that can withstand poor national economic performance for more than a short time. A robust national economy, however, is a necessary but not a sufficient condition for regional growth. Each state's share of the total investment is determined by its relative desirability over other states. In the seventies, Florida and other Sunbelt States have exhibited a more conducive investment environment and have grown at the expense of the less attractive Snowbelt States.

National Investment Trends

Nationally the seventies was a period of modest investment and even more modest productivity increases. Many of the reasons for this are rooted in demographic and legislative phenomena such as: (1) the glut of entry level workers, (2) tax laws that aggravated the impact of inflation, (3) rapid shifts in relative prices, especially of energy and (4) large government mandated investment programs for environmental and worker safety reasons. These factors did not affect all sectors of the economy or all states. Fortunately, Florida was mildly impacted. This, combined with strong gains from the redistribution of the Nation's productive process to the Sunbelt, permitted Florida to achieve a strong investment performance.

A sizeable portion of investment in the seventies was a reaction to rapidly changing relative prices of inputs to the production process. The two large jumps in crude oil prices disrupted the economy and made a portion of the Nation's capital stock obsolete. Older energy intensive equipment could only produce goods that were competitive if cheap energy were available. Investment was needed to replace these energy inefficient plants and equipment. Thus, whatever productive capacity that was added by the new investment was only replacing that lost through retiring the now obsolete older plant and equipment. Other expenditures were made for insulation and better recycling of wasted energy. Although these expenses saved the manufacturer money, they did not increase output capacity. Accommodation to the new energy prices is progressing well, and the eighties should see a more complete adjustment. In 1970, the U.S. used 62,000 BTU's for every dollar of real GNP; by 1980, this had dropped to 51,500. It is estimated that by 1990 this will drop to 42,000,

which amounts to a 2 percent annual gain in efficiency over the decade.

TABLE FOUR
NATIONAL ECONOMIC FORECAST

	1981 Actual	Annual Average Growth Rates 70-80	80-85	85-90
		%	%	%
Real GNP (72$)	1,509.4	3.15	2.54	3.22
Real Personal Consumption(72$)	959.1	3.36	2.94	3.17
Real Investment Spending(72$)	206.8	2.92	4.32	4.32
Consumer Price Index	272.4	7.82	7.83	6.17
Mortgage Rate*	16.6	9.38	16.35	13.21
T-Bill Rate*	14.0	6.82	11.27	7.99

* Annual Average Rate

Source: Executive Office of the Governor, U.S. Department of Commerce, U.S. Department of Labor, U.S. Department of the Treasury and Data Resources, Inc.

Another factor contributing to slow increases in productivity was Federal legislation requiring businesses to pay the full cost of providing their products. This took the form of regulations designed to promote worker safety and discourage pollution. These regulations required investments to be made that increased the quality of the workplace and the surrounding environment but for the most part did not add to the output of goods and services traditionally measured by GNP. Most of the backlog of mandated investment has been accomplished and these quality enhancing investments should not be so large a portion of total investment in the future.

At the same time that investment was being diverted from increasing capacity, investment in plants and machinery was discouraged by depreciation laws that did not adequately take inflation into account. The real costs of the investment could never be written off. When the time came to replace capital, the price had risen well beyond any depreciation allowance. During the same period, the labor force was experiencing large increases in entry level workers from both the baby boom and the higher number of women working for the first time. During the sixties, the size of the labor force relative to the population remained stable at about 58.5 percent. During the seventies, this percent-

age rose to almost 63 percent. Most of the increase reflects higher labor force participation by women. The two-wage earner family became typical. The rising divorce rate resulted in more single (usually female) heads of household who were forced to enter the labor force--often for the first time or without any specialty skills. The large numbers of relatively unskilled youths and women usually began work in the service sector where workers tend to get low or minimum wages.

With cost factors favoring labor over capital, in the large service sector the tendency was to add to the labor force rather than capital. The low gains in productivity during the seventies reflect this tendency. Gross productivity gains were cancelled out by increased labor intensity in services as well as investment to accommodate pollution regulations and increases in energy costs. During the period from 1959-69, productivity--output per worker--rose at an annual rate of 2.8 percent, but dropped to 1.7 percent during the 1973-78 period. In 1979, it was only up one percent.

This productivity trend should change directions soon, however, for several reasons. Entry level labor will become scarcer as the baby boomers age and the increase in the percentage of women entering the work force levels off. Technological advances--particularly in electronics, lasers and robots--and their resulting lower cost, will encourage firms to purchase equipment that improves service worker productivity. Small computers and their terminal displays, already prevalent on office desks and counter tops, will become more so in the eighties. Depreciation rules have recently been changed allowing faster write-offs, thus helping offset inflationary factors. Further changes in tax laws encouraging capital investment are probably forthcoming.

Florida Investment Trends

The difference in investment performance between Florida and the Nation was substantial in the seventies. Although nationally output was not growing rapidly, significant redistribution of shares was going on. From 1970 to 1980, Florida's population grew at an annual rate of 3.7 percent, nearly four times the national rate of 1.1 percent. The State's rate of nonfarm job growth over the same time span (5.2 percent) was well over twice the nationwide rate of increase. In terms of real dollars, Florida's annual business investment growth was better than the Nation's fixed investment growth in all but two years of the decade. Florida recorded an average annual increase of 9.6 percent in real business investment during the period while the Nation's real fixed investment grew at an annual rate of 3.3 percent.

This dramatic increase in the size of the Florida economy was accompanied by changes in the character of the State's economic base, which became more diversified. Traditionally, a continuing influx of population and an ever-increasing flow of tourists has meant that economic growth took the form of higher levels of activity in the trade and services sectors. While this activity remained very important during the seventies, the decade also witnessed substantial growth in the State's manufacturing sector. From 1970 to 1980, Florida added 134,700 manufacturing industry jobs. Employment in the manufacturing industry increased by 3.6 percent annually in Florida, while at the same time it grew at a .5 percent rate nationwide. As a result, Florida's share of national manufacturing industry employment grew from 1.7 percent in 1970 to 2.2 percent in 1980.

In a like manner, growth in expenditures for new plant and equipment by Florida manufacturers generally outpaced the rate of new capital investment growth nationwide. From 1970 to 1978, the average annual rate of increase in new capital expenditures by Florida manufacturers was 15.5 percent; the average rate of increase for manufacturers nationally was 12.6 percent. In 1978, manufacturing establishments in Florida invested $1.081 billion in new plant and equipment. That constituted 2.0 percent of the nationwide expenditure, whereas, in 1970, Florida's share had been 1.7 percent.

These very positive Florida economic trends show little evidence of slowing. Population migration into the State is continuing at a rapid pace. From 1979 to 1980, the number of Florida residents grew by an estimated 3.1 percent compared to the Nation's 1.2 percent rise in population. The level of nonfarm employment increased by 5.6 percent while the number of nonfarm jobs edged upward by only 0.9 percent nationwide. Florida's estimated real business investment for 1980 was 11.9 percent higher than in the previous year. National real fixed investment for that year was 7.2 percent lower than in 1979. Diversification of the industrial base continued as well. While the nation was experiencing a 3.5 percent decline in the average number of manufacturing industry jobs for the year ending in May, 1981, Florida registered an increase of 3.1 percent or 13,600 jobs.

Although the changes in labor force growth and tax policy bode well for the eighties as a whole, the first half of the decade will be characterized by great volatility. Recessions early on have kept the economy from achieving its long run growth path, but if current policies prove successful in combatting the inflation which has been a persistent problem for the last several years, the economy will be much healthier by mid-decade than it is presently. Now that the euphoria has worn off of the President's economic recovery program, it is apparent that setting our economic house in order will take a bit longer than originally anticipated. Although the Federal Reserve has been successful in

lowering the inflation rate by restricting the growth of the money supply, the cost has been persistently high interest rates. These in turn have discouraged investors from taking advantage of all the tax incentives in the Economic Recovery Tax Act of 1981 (ERTA).

It is expected that a modest recovery in the second half of 1982 will lead to several years of substantial investment growth. The modest 4.3 percent growth for 1980-85 is due to the poor performance in 1980-81. During the recovery, growth of as much as 10 percent is expected. Although this will be a welcome relief from the stagflation of the recent past, it is not strong recovery by historical standards. This is partly because the transition from high inflation and regulated financial markets to lower inflation with free markets will be lengthy and sometimes painful.

The inflation rate will average 7.8 percent for 1980-85, and will stubbornly stay above 7.0 percent until at least 1986. Although high, this is still better than the double digit levels of 1979-81. In conjunction with this, interest rates will remain high until mid-decade, when they will fall to roughly the levels experienced in the late seventies. In real terms, the new monetary environment has caused a dramatic change. While the prime rate averaged 2 percent in real terms in the seventies, the first half of the eighties will see an average of about 7 percent. The high rates for the whole interest structure will have a dampening effect on investment, and this is the main reason for the modest recovery expected from the current recession.

Because of the slowness in investment and the more modest growth in the labor force, employment will not grow as fast in the eighties as it did in the seventies. Only 17.3 million new jobs will be created as compared to the 19.7 million new jobs created during the seventies. Manufacturing will stage a comeback of sorts, however, adding 2.9 million jobs as compared to only 0.9 million last decade. Although the Nation will be slowing in new job creation, mainly due to the supply constraint of fewer workers, Florida will not be similarly constrained.

The Sunbelt states, including Florida, would seem to be in an excellent position to gain more than their share of new business investment. Encouraged to make capital expenditures by Federal policies, Snowbelt industrial establishments needing to reinvest in new plant and equipment may well use the occasion to relocate in Sunbelt states.

The current plan to substantially increase spending on national defense is another way in which Federal government policies seem likely to bolster investment in Florida and the other Sunbelt states. The Administration's original plan was to double the defense appropriation by 1986, aiming at over $300 billion in defense spending for that year. The expenditures will

be made at the expense of other government programs, so the total impact on government won't be changed, but the spatial impact will be, as Florida and other Southern states are heavily involved in defense. Because of these and other factors, the forecast envisions Florida's employment growing over three times as fast as the Nation's as a whole. Further, manufacturing employment, due to the current emphasis on diversification, is expected to increase at an average annual rate of 4.52 percent during the eighties, which is over five times the national rate.

TABLE FIVE
FLORIDA EMPLOYMENT BY SECTOR
Average Annual Rate of Change

	1970-1975 %	1975-1980 %	1970-1980 %
Mining	2.30	2.48	2.39
Contract Construction	.78	7.89	4.27
Manufacturing	1.04	6.14	3.56
Trans., Comm. and Pub. Utilities	3.44	3.70	3.57
Wholesale and Retail Trade	5.51	5.48	5.50
Fin., Ins. and Real Estate	7.49	6.05	6.76
Services and Miscellaneous	7.02	6.91	6.97
Government	6.54	2.45	4.48
Nonfarm Total	5.00	5.20	5.10
Unemployment Rate, Percent*	6.24	7.15	6.70

	1980-1985 %	1985-1990 %	1980-1990 %
Mining	1.96	1.78	1.87
Contract Construction	2.46	1.02	1.74
Manufacturing	4.50	4.54	4.52
Trans., Comm. and Pub. Utilities	3.09	1.62	2.35
Wholesale and Retail Trade	5.08	6.38	5.73
Fin., Ins. and Real Estate	4.43	4.74	4.58
Services and Miscellaneous	6.55	7.72	7.13
Government	1.89	3.12	2.50
Nonfarm Total	4.47	5.31	4.89
Unemployment Rate, Percent*	6.98	5.69	6.34

* Average annual rate.

Source: Executive Office of the Governor and Department of Labor and Employment Security.

Florida's economic growth and increasing economic diversification--not only in the form of a stronger manufacturing sector but also in terms of its growing role in the international economy--are winning national recognition. A recent E.F. Hutton report described Florida as "...by far the best performing Southeastern State in terms of economic growth in 1980." Credit analysts Prescott, Ball and Turbin ranked Florida high in the municipal bond market, saying, "Florida's economy is much stronger than most people realize because the State is relying less on tourism and more on its industrial base." The Merrill-Lynch investment firm recently upgraded Florida's rating for general obligation bonds from double-A to triple-A. These statements reflect a growing awareness on the part of the Nation's investment decision makers that Florida has become an even more desirable location for business investment.

Factors Responsible for Florida's Strong Growth Performance

National trends and government policies appear to favor a continuation of strong economic growth for Florida. The State's economic performance in recent decades lends further credence to this expectation. A key question remains, however: to what extent will the attributes or features which have been the basis for a strong economic performance by Florida in the past remain in force? Those conditions which have provided the basis for past economic growth are discussed below.

Florida's natural amenities--beaches, water, land, sunshine, and so on--have been perhaps the most basic reason for the State's population and economic growth. To these natural amenities must be added the extensive manmade recreational, cultural and educational facilities Florida has to offer: entertainment, parks, professional sports, art museums, theaters and universities.

Features such as these are expected to continue to attract tourists and permanent residents to the State in large numbers. The anticipated rate of population growth from 1980 to 1990 is somewhat below that recorded in the seventies but still several times the rate for the entire Nation. A very positive ramification of such population growth is its meaning to firms interested in locating markets for their products. Florida is expected to become the fourth most populous state in the Nation by 1990. Furthermore, the population is heavily concentrated in 16 metropolitan areas, increasing marketing convenience.

Obviously, the large volume of tourists visiting each year has a huge market impact. In 1980, an estimated 35.9 million tourists visited Florida. It has been estimated that this volume of tourism has the effect of increasing the State's population by the equivalent of over one million year-round residents.

It seems quite likely that an even greater number of firms will view the Florida market as having reached the critical size warranting the location of production or distribution facilities in the State. Consideration of the wider Southeastern U.S. regional market, and its growing population of 52.6 million, would further encourage such a decision.

Certainly a major factor in determining Florida's ability to vie for its share of national economic growth through the next decade will be the extent to which the costs of doing business in Florida compare favorably with the costs in other states. Since there is quite a variety of business costs, all of which change in both relative size and importance over time, assessing Florida's business cost position vis-a-vis other states is a complicated task.

At least one study of business costs concluded that Florida has the most favorable climate of all the states. Alexander Grant and Company makes an annual assessment which evaluates 22 factors considered important by manufacturers in making location decisions. These factors cover a wide range of issues: state and local government fiscal policies, state regulated employment costs, labor costs, availability and productivity of the labor force, non-labor costs and market potential. Over half of the factors are government controllable; on a separate ranking based on these alone, Florida was again ranked number one. This, plus the steady increase from the 12th ranking in 1979 to number one in 1981, reflects the success of efforts by state and local governments to create a more conducive investment environment.

The study shows Florida in a very favorable position relative to other states. Taxes and outstanding debt are low and expenditures on programs that don't provide some direct or indirect benefit to business are low as well. Total labor costs are very competitive and the work force is educated, motivated and efficient. The one cost factor that stands out as high is energy costs; here Florida ranked 34th.

The probability of a significant deterioration in Florida's business cost position relative to other states seems small. The business climate being fostered by State government would seem to increase the likelihood that Florida will continue to score high as a good place to do business.

The cost, availability and quality of workers is a prime consideration for a firm planning to start operations in a new locale. Florida holds a favorable position in terms of certain aspects of labor costs: manufacturing industry wages, workers' compensation premiums and average unemployment compensation benefits paid. Other elements of the labor supply picture should be noted briefly.

The degree of unionization in an area remains an important factor in firm location and expansion decisions according to recent studies. By its Constitution, Florida is a "right-to-work" state. A good indication of the cooperative relationship between employees and employers in the State is provided by work stoppage figures. In 1979, the percentage of days idle due to work stoppages in Florida (.05 percent) was only one-third the percentage for the Nation as a whole (.15 percent).

With so much attention devoted to the in-migration of older Americans to Florida, the dramatic rise in the size of the working age population is sometimes forgotten. By 1980, the State's civilian labor force had exceeded 3.9 million persons. This placed the Florida labor force as the eighth largest in the Nation--the same national ranking as the State population. From 1970 to 1980, the Florida civilian labor force grew by 47 percent.

The education and training of that labor force is the object of major commitment of State resources. Florida ranks first in the Nation in per capita expenditures for vocational education. The Industry Services Training Program is an example of the vocational education effort in Florida. It arranges training or retraining of local workers to meet the specific skill needs of new or expanding industry. The close working relationship between Florida higher education and private enterprise is evidenced by such programs as the Florida Solar Energy Center, the Small Business Development Institute, the Center for Professional and Management Development and others. Indications are that the trends toward a larger and higher quality Florida labor force will continue. Growth of the labor force almost certainly will proceed at a rapid pace.

The outlook for international trade, finance and tourism in Florida is discussed elsewhere in this report. However, it is important to note in this present context that the State has shown an increasing ability to participate in the benefits of international commerce. Foreign trade in Florida increased eightfold from 1970 to 1980, reaching $16.8 billion in 1980. Florida's share of U.S. exports rose from 2.7 percent in 1970 to 4.7 percent in 1980. In 1980, an estimated 2.1 million international tourists (in addition to Canadian tourists) visited the State spending over $2 billion. While precise figures are not available concerning foreign investment in Florida, it has been estimated that $10 to $20 billion have been put into the State with much more coming in each year.

These trends are very likely to continue. Florida is especially well located for trade with the Latin American countries. The State also has developed the financial and physical infrastructure to service international commerce with 14 deepwater ports, a network of international airports, 25 Edge Act banks, 21 foreign banks and five foreign trade zones. These capabilities

provide a special advantage for Florida in competing for the economic growth expected to occur during the eighties.

Key Industries in Florida's Development Future

The very presence in a geographic area of a number of firms engaged in the production of similar products can itself encourage further area growth in that industry. Supply and distribution infrastructures grow up around the cluster of manufacturing establishments. For example, firms producing the materials needed for the manufacture of the common product are lured to the area. Transportation channels geared to the distribution of that particular product are established. In some cases, educational programs are shaped to meet the training requirements of the local industry. The existence of these supporting facilities creates certain economies for firms in that industry and induces outside firms to benefit from these economies by building their own facilities in the area.

There are signs that such a situation may be emerging in Florida for particular manufacturing industries. Concentrations of firms engaged in the manufacturing of the same, or very similar products, are occurring. In 1980, Florida manufacturing establishments accounted for 2.2 percent of nationwide manufacturing jobs. However, in a recent year, Florida held 3.2 percent of the Nation's employment in the production of aircraft and parts, and even higher proportions of nationwide employment in the manufacture of electronic computing equipment (4.4 percent), medical instruments and supplies (4.5 percent), communication equipment (4.8 percent) and ships and boats (6.3 percent). Although growth has been widespread, these industries are exhibiting a degree of geographic concentration within the State. For example, the electrical and electronic equipment firms have tended to locate along the Southeastern Florida coast, in the Tampa Bay area and in Orange and Brevard Counties (with some recent activity in the Jacksonville and Pensacola metropolitan areas). The presence and extent of concentration of certain manufacturing industries in Florida seems to hold the promise of generating additional industrial recruitment and growth.

Florida manufacturing employment growth has been derived largely from activity in the durable goods manufacturing category. From 1972 to 1980, 70 percent of manufacturing employment growth in the State came in that classificaton. It is possible to select several manufacturing industries which, because of their record of recent growth, are likely to hold the key to future investment and employment growth in Florida manufacturing.

The defense industry is becoming increasingly important to the Florida economy. The Reagan administration has emphasized the need to expand our military capabilities to counter a growing

threat from the Soviet Union. The administration has proposed spending an additional $70 billion in real dollars by 1985. With Florida's concentration of defense contractors and military installations, it is likely the State's economy will benefit more from this increase than most. In the past, Florida has received more than the national average of Federal defense spending. During fiscal year 1980, more than $5 billion in Department of Defense money was spent in Florida, placing it fifth in the Nation. Approximately $2.1 billion of that figure was administered through firms serving as "prime contractors." Nineteen of the Fortune 500 companies involved in defense contracting do Department of Defense work at their establishments in Florida.

The presence of these firms--providing such goods and services as computer and communication equipment, photographic work, aircraft engines and research and development--puts Florida industry in a good position to receive at least its share of defense contracts in the future. That presence also increases the likelihood that other defense-related firms will locate in the State. A recent survey revealed that Florida's quality of life and the availability of a trained labor force were important factors encouraging prime defense contractors to locate in Florida.

The presence of 17 military bases in Florida also increases the chances for substantial gains to the State from the national emphasis on defense. From 1972 to 1979, Florida was able to increase its share of national military employment from 4.3 percent to 4.9 percent. The State currently ranks fourth in compensation to defense personnel. As the Nation's defense base expands with increasing numbers of ships and aircraft, more people will be needed to run and maintain them. They will need to be well paid, particularly in the higher enlisted ranks, in order to compete with outside opportunities in the civilian work force. This means that Florida's 80 thousand plus Defense Department work force will grow and that payrolls will grow even faster, even in real terms.

The electric and electronic equipment manufacturing industry recorded the greatest share of Florida manufacturing job growth from 1972 to 1980: 30,000 additional jobs, accounting for 28.3 percent of manufacturing employment growth during the period. It also accounted for the largest share of job growth from 1979 to 1980 and the largest single portion of manufacturing jobs of any industry (13.7 percent)

In Florida, the production of communications equipment (radio and T.V.) and electronic components are the major activities in this industry. The nature of the typical industry product--usually light in weight and relatively compact--means that transportation costs from production facilities located in Florida are not so high as they might be for larger, heavier products.

The national outlook for the electric and electronic equipment manufacturing industry is very positive through 1990. The industry is expected to record the second highest rate of employment growth among manufacturing industries (1.9 percent annual rate) from 1981 to 1990 and the third highest average annual rate of growth in investment in plant and equipment (14 percent).

Growth in the Florida electrical and electronic equipment manufacturing industry slowed somewhat in 1981, a reflection of a downturn in national demand. Nevertheless, there now are signs of a rebound. At the very least, Florida firms can be expected to do as well as the industry does nationally through 1990.

The non-electrical machinery manufacturing industry was second only to electrical and electronic equipment manufacturing in terms of job growth from 1972 to 1980 (18,300 jobs). It ranked first among manufacturing industries in providing additional employment from 1979 to 1980. This industry is expected to provide the largest single share of new manufacturing jobs nationwide (36 percent) while recording the fastest employment growth rate (2.6 percent annual rate) over the period. Investment in the industry is expected to have the second highest average yearly rate of increase (14.5 percent).

The printing and publishing industry, which centers on newspaper publishing and commercial printing in Florida, has shown particularly strong employment growth. The 4,100 job increase in the printing and publishing industry between 1979 and 1980 was second only to that recorded in non-electrical machinery manufacturing. Newspaper publishing employment is distributed among the State's population centers. The increase in jobs in the commercial printing component seems to be a clear reflection of Florida's dramatic population and business growth in recent decades. This industry is expected to do well through 1990, and is seen as providing the fifth largest number of manufacturing industry jobs, nationally.

Florida's transportation equipment manufacturing industry accounted for the fourth largest number of new manufacturing jobs from 1972 to 1980. Its emphasis on the production of aircraft, aircraft parts, ships and boats distinguishes it from the national transportation equipment industry, so heavily comprised of motor vehicle production. The manufacture of instruments and related products is expected to record high rates of employment and investment growth nationally through 1990. This makes it likely that the industry will continue to be a very significant source of new jobs in Florida.

Government Involvement in the Development Process

A number of studies of firm relocation decision making have cited the importance of a state's business climate in attracting new industry. Of the eighteen factors identified by a 1976 Cornell University study as selected by businessmen as important in locating a firm, three factors concerned the attitude of state and local government leaders. Many of the other factors, such as those concerning taxation, are directly affected by government action. State government and many local governments in Florida have made long-term commitments to economic development and diversification. At the State level, Governor Graham listed several economic development goals among his foremost concerns in the statement of goals accompanying his 1981-82 budget request to the Legislature. The State was to encourage the development of manufacturing industries, emphasizing high wages, high technology and minimal environmental impact. Certain industries--aviation, defense, electronics, drugs and pharmaceutical products and medical instruments--were to be targeted for special attention. Assistance was to be provided to geographic areas having exceptional economic development difficulties and constraints.

Florida has an aggressive program for promoting economic development, a program which extends beyond the current Governor's policies. This program is the responsibility of the Division of Economic Development within the Department of Commerce. That Division carries out programs aimed at recruiting new industry, encouraging the expansion of existing industry, promoting the sale of Florida products and facilitating increases in international trade and investment.

Recently, the government resources used to accomplish these objectives have been bolstered. The Legislature granted the Department of Commerce a substantial budget increase for 1981-82 in order for the Department to begin implementation of a comprehensive marketing plan for encouraging economic development and tourism in Florida. In addition to promoting the State as a place to work, visit and invest in, the plan calls for increased levels of assistance to a variety of clients:

- Local organizations and officials for improving their economic development and industrial solicitation programs;
- Existing Florida businesses for their expansion and development efforts;
- Outside firms for determining the best locations for new plants and establishments;
- Foreign governments and businesses to learn of opportunities for trade and investment in Florida;

- Consumers of manufactured goods in other states for establishing contact with Florida producers of those goods; and

- Motion picture, television and recording producers in the form of location scouting, liaison with local governments, permit expedition and other services.

In addition to this increased financial support for the Economic Development Program, the Legislature and, in some instances, the voters themselves recently have taken steps to improve Florida's climate for economic growth. The list of actions taken in 1980 and 1981 alone is impressive. The trucking industry was completely deregulated. Legislation was passed aimed at streamlining Florida's Development of Regional Impact permitting process, providing for an optional coordinated review of projects by regulatory agencies, among other changes. The types of businesses eligible to use industrial revenue bonds was expanded. In addition, the Legislature created a new program to fund the construction or improvement of roads where the location or expansion of new businesses causes a significant increase in traffic.

Florida also has taken several steps to ease further the tax burden on businesses in the past two years. Perhaps the most noteworthy action was taken by the voters in 1980 when they passed a Constitutional amendment establishing a local option ad valorem tax exemption program for new and expanded businesses. Under this program, local governments, after a local voter referendum, can grant an ad valorem tax exemption to new or expanding businesses for 100 percent of the increased value of real property (excluding land) and for 100 percent of intangible personal property for ten years.

So far, voters in 15 counties and 16 communities have passed referendums establishing the program. The program has never been defeated in a referendum. In fact, the typical margin of support has been at least two-to-one in favor.

Other recent tax reduction measures have included legislation exempting international banking transactions from both the Intangibles tax and the Documentary Stamp tax, the passage of a Consititutional amendment enabling the Legislature to do away with the tax on inventories for all businesses and a program of corporate tax credits for firms locating in "enterprise zones." The tax exemptions for international transactions cleared the way for the establishment of a "Master Edge Act Headquarters" in the State. The Legislature followed up on the Constitutional amendment by terminating the business inventory tax in 1981. The corporate income tax credits were aimed at encouraging revitalization of distressed areas.

It is difficult to measure the actual effects of government programs and policies designed to promote economic development. One way to approach this question, however, is to look at objective business climate ratings by scholars who have studied those factors which are important in business firm relocation and expansion decisions. The overall ranking of state business climates by Alexander Grant and Company, referenced previously, showed Florida improving its national ranking from twelfth best in 1979 to eighth best in 1980, to number one in 1981. It is worth noting that the Grant rating scheme does not include a factor relating to "quality of life" or lifestyle. Florida's climate, recreational opportunities and similar attributes compare favorably with those of many other states. Consideration of these aspects plus the business climate makes Florida an exceptionally attractive place to do business.

Statistics concerning the involvement of the Department of Commerce in attracting new employment and investment to the State constitute another means of assessing the effectiveness of government programs. During 1979 and 1980, that Department was involved in the location of 187 new firms in the State. These new firms have meant over 45,000 jobs and $1.7 billion of investment for Florida. The most recent data available are just as encouraging. During the first six months of 1981, the Department of Commerce was involved in the relocation of 95 new firms to Florida, generating 12,000 jobs and $438.5 billion in investment.

Florida's new commitment to economic growth should itself be viewed as a vital asset the State will bring to its attempt to gain a larger share of the national investment and employment growth expected through 1990. The effects of this orientation on the State's national image and on the cost of doing business in Florida should result in new industry and the expansion of existing firms.

INTERNATIONAL TRADE AND FINANCE

In the seventies international transactions in Florida grew by record numbers. Taking advantage of its geographic location and large Latin community, the State has emerged as "the Gateway to the Americas." Throughout the last decade Florida has developed an extensive infrastructure to accommodate international trade and financial transactions. International seaports and airports have been expanded to handle the increased passenger and goods flow. International banking facilities have been established in record numbers across the State. The continued growth of the international sector will contribute significantly to Florida's economic well-being in the eighties.

International Trade

Table Six gives the dollar value of Florida's international trade and average annual rate of change for the seventies. In 1970, foreign goods and services valued at $1.0 billion were imported through the State. During the decade imports increased at an average annual rate of 20.8 percent, so that by 1980 the value of imports reached $6.5 billion. Exports from Florida also increased rapidly, from $1.2 billion in 1970 to $10.3 billion in 1980, which represents an average annual growth rate of 24.2 percent.

Although Florida accounts for a modest percentage of total United States international trade, it plays a key role in trade with Latin America and the Caribbean. Florida Customs Districts account for 17 percent of United States exports to Latin America and the Caribbean, and 7.5 percent of United States imports from the area.

The growth in international trade for the State is expected to continue through the eighties. Over 70 percent of all Florida exports are destined for Latin America and the Caribbean. These are dynamic growth markets of considerable diversity. The Latin American and Caribbean economies have a combined population of over 340 million people. Brazil alone has a population of approximately 120 million. Economic growth in the area has been substantial. Real gross domestic product grew, on average, 5.7 percent per year during the 1969-1979 period, significantly surpassing the growth rate of most industrial economies. Although the forecast for economic growth in the eighties is lower than that experienced in the seventies, economic growth in Latin America and the Caribbean is anticipated to be above the world average.

TABLE SIX
FLORIDA'S INTERNATIONAL TRADE, 1970-1980
(Millions of U.S. Dollars)

Year	Exports	% Change From Prior Year	Imports	% Change From Prior Year
1970	1,180.1		974.2	
1971	1,193.1	1.1	1,180.5	21.2
1972	1,454.7	21.9	1,635.4	38.5
1973	1,805.6	24.1	1,971.9	20.6
1974	2,955.6	63.7	2,737.5	38.8
1975	3,765.8	27.4	2,404.8	-12.2
1976	4,200.4	11.5	3,031.7	26.1
1977	5,136.8	22.3	3,693.7	21.8
1978	6,276.0	22.2	4,725.9	27.9
1979	7,597.6	21.1	5,917.1	25.2
1980	10,339.4	36.1	6,472.7	9.4
1970-1980	45,905.1	24.2*	34,745.4	20.8*

* Percentages are compound annual rates.

Source: Florida Department of Commerce

Economic growth in this region will translate into increased demand for Florida's exports. International trade is of vital importance to Latin America and the Caribbean. Such trade has outpaced the region's brisk real economic growth. The Latin American and Caribbean economies are dependent on continued importation of high technology capital goods and intermediate goods to support their economic growth goals. The area's growing population and increased need for foodstuffs will also increase the demand for one of Florida's major export items: phosphate fertilizers.

The economies of the two big oil producing countries, Venezuela and Mexico, will encounter particular difficulties in accommodating growth. Because internal industrial capacity alone is not sufficient to build the modern economy which oil export revenues can finance, these two countries will rely increasingly on international trade to supply the machines and transport equipment needed for sustained growth and for the manufactured goods demanded by their increasingly affluent population.

TABLE SEVEN
THE STRUCTURE OF FLORIDA IMPORTS, BY CUSTOMS DISTRICTS, 1979

	Tampa District		Gulf District		Miami District		Florida Totals	
	$ Millions	% of Total	$ Millions	% of Total	$ Millions	% of Total	$ Millions	% of Total
Total Commodities	2,957.3	100.0	61.0	100.0	2,167.2	100.0	5,185.6	100.0
Food & Live Animals	466.5	15.8	**	*	606.5	28.0	1,073.0	20.7
Beverages & Tobacco	19.3	.7	.3	.6	102.2	4.7	121.8	2.3
Crude Mat., Except Fuels	33.9	1.1	6.2	10.2	127.4	5.9	167.6	3.2
Minerals Fuels, Lubricants and Related Mat.	363.5	12.3	45.8	75.1	176.3	8.1	585.7	11.3
Oils & Fats, Animal & Veg.	.3	*	0	*	1.3	*	1.7	*
Chemicals	117.2	4.0	7.5	12.3	57.8	2.7	182.5	3.5
Mfg. Goods Classified Chiefly by Material	255.2	8.6	.5	.8	273.5	12.6	529.2	10.2
Machinery & Transport Equipment	1,678.3	56.8	.6	1.0	252.9	11.7	1,931.8	37.3
Miscellaneous Mfg. Articles	17.2	.6	**	*	476.5	22.0	493.7	9.5
Commodities and Trans., NCF	5.9	.2	0	*	92.7	4.3	98.6	1.9

* Less than 0.1 percent
** Less than 100,000

Source: Florida Department of Commerce.

TABLE EIGHT
THE STRUCTURE OF FLORIDA EXPORTS, BY CUSTOMS DISTRICTS, 1979

	Tampa District		Gulf District		Miami District		Florida Totals	
	$ Millions	% of Total	$ Millions	% of Total	$ Millions	% of Total	$ Millions	% of Total
Total Commodities	1,898.7	100.0	237.6	100.0	5,534.1	100.0	7,670.4	100.0
Food & Live Animals	193.5	10.2	109.6	46.1	372.3	6.7	675.4	8.8
Beverages & Tobacco	6.5	.3	.1	*	153.5	2.8	160.1	2.1
Crude Mat., Except Fuels	483.8	25.5	72.0	30.3	101.3	1.8	657.0	8.6
Minerals Fuels, Lubricants and Related Mat.	.3	*	**	*	9.1	.2	9.4	.1
Oils & Fats, Animal & Veg.	9.7	0.5	.1	*	26.1	.5	36.0	.5
Chemicals	933.2	49.1	16.5	6.9	392.3	7.0	1,341.9	17.5
Mfg. Goods Classified Chiefly by Material	86.7	4.6	34.9	14.7	754.2	13.6	875.9	11.4
Machinery & Transport Equipment	136.4	7.2	4.0	1.7	2,892.8	52.2	3,033.2	39.5
Miscellaneous Mfg. Articles	48.3	2.5	.4	.2	784.0	14.2	832.8	10.9
Commodities and Trans., NCF	.3	*	0	*	48.4	.9	48.7	.6

* Less than 0.1 percent
** Less than 100,000

Source: Florida Department of Commerce.

Tables Seven and Eight show the structure of Florida exports and imports by Customs Districts for 1979. The Miami Custom District, which includes the Port of Miami, Key West, Port Everglades, West Palm Beach and Fort Pierce, accounts for approximately 70 percent of Florida's exports. Machinery, transport equipment and manufactured goods dominate the Miami District exports. The Tampa District is important in chemical exports, particularly phosphate rock and phosphoric fertilizer.

On the import side, Florida's trade pattern is more diversified. Latin America and the Caribbean accounted for only 37 percent of imports entering Florida Customs Districts in 1980. This is partly because petroleum--the main export to the U.S. from Venezuela, Netherlands Antilles, Trinidad-Tobago and Mexico--does not, as a general rule, enter the U.S. through Florida Customs Districts.

Of countries outside the region, Japan is particularly important, representing 29 percent of Florida Customs District imports. These Japanese imports are primarily motor vehicles entering through Jacksonville's seaport. Machinery and transport equipment represented over a third of imports entering into Florida in 1979; food and beverage imports represented nearly another quarter. Approximately 60 percent of Florida imports enter through the Tampa Customs District, which includes the ports of Tampa, Jacksonville, Boca Grande, St. Petersburg and Port Canaveral.

The outlook for Florida's international trade is good. Growth in this sector will be helped by the increasing interest in offshore assembly operations and the simultaneous development of free trade zone activity in the State and in Latin America and the Caribbean.

International Banking

During the seventies Florida's economy developed into an important banking center. The international banking participants consist of a growing number of Florida commercial banks operating internationally-oriented banking subsidiaries (Edge Act Corporations), foreign banks operating as Edge Act Corporations and foreign bank agencies and representative offices.

The growth in the State's international banking and financial sector has been stimulated by growing international trade and passenger traffic. State regulatory changes have also had a significant impact. In 1977, Florida authorized the establishment of foreign bank agencies and representative offices. Since that time, 29 foreign banks have opened or are about to open offices in Florida. These banks have added breadth to Florida's internation-

al banking, expanding both international banking services and expertise available to Florida businessmen. The foreign banks with Florida facilities have, at the same time, furthered the State ties with the banks' home countries.

Changes in federal banking regulations have also had an important impact on Florida's international banking and finance sector. The 1978 International Banking Act made the use of Edge Act Corporations more flexible and as a result, their numbers in Miami grew from 9 in 1978 to 36 in 1981, which is the largest number in any U.S. city. Edge Act Corporations are chartered by the Federal Reserve System, and are confined to dealing with the international transactions of U.S. firms and with entities abroad. Nearly 90 percent of all of the Edge Act Corporation transactions in Miami are with Latin America.

Florida-based commercial banks have likewise expanded their international banking capabilities. According to a study conducted by the Federal Reserve Bank of Atlanta, in mid-1980 Florida-based commercial banks were responsible for 60 percent of Miami international deposits, and well over a third of Miami international lending. Again, the vast majority (nearly 90 percent) of such international banking by the Florida-based commercial banks is conducted with Latin American firms and individuals.

If the growth in international financial transactions is to be continued, Miami must maintain the advantage it now has over other U.S. areas as an international banking center. Currently, it has the advantage of a lower tax base than that in New York City. The exemption of international transactions from the State's Intangibles and Documentary Stamp taxes by the 1980 Florida Legislature further improved Florida's favorable international financial environment. The legislation passed during the 1980 session also applies to the International Banking Facilities (IBF's) recently approved by the Board of Governors of the Federal Reserve System. IBF's are facilities at U.S. banking offices which would be free of state and local income taxes, reserve requirements and restrictions on interest rates. Such facilities would be of an offshore nature, catering to entities based abroad. The establishment of IBF's in Florida adds another dimension to Miami's international financial development. It encourages the establishment of additional Miami Edge Act Corporations, particularly by banks without New York offices and banks which operate in states without tax exempt IBF facilities.

TOURISM

Tourism has long been a mainstay of Florida's economy. Even in today's diversified economy, the tourist industry remains an important component. Tourists come to Florida for a variety of reasons. The State's natural amenities offer numerous sport and recreational opportunities. Tourists come to Florida to sun on its beaches, fish in its rivers, lakes and coastal waters and otherwise enjoy our fair weather and vast natural resources.

In recent years the view of Florida as a family vacation spot has been enhanced by the development of theme and amusement parks throughout the State. The Walt Disney World complex in Orlando draws tourists from all over the world. When Disney's $800 million Environmental Prototype Community of Tomorrow (EPCOT) opens in October 1982, the number of visits per year to the expanded complex is anticipated to more than double. Other tourist attractions are moving into the Orange County area to take advantage of the Disney tourist drawing power, and the region is developing a large base of visitor attractions. To handle the anticipated escalation of tourists arriving by air in the coming decade, a new airport has recently opened with a capacity of 12 million visitors a year.

In recent years Florida has seen an increase in foreign visitors, especially from South America and Europe. By 1981 almost one in 10 visitors were from outside the U.S. and Canada. This growth in international tourism had been aided by the decline of the dollar relative to other currencies, which helped make a Florida vacation a bargain when paid for with foreign currencies. Foreign tourists come to Florida for all the same reasons domestic visitors do. For a foreign tourist, however, especially those from South America, Florida offers an added attraction--a place to shop for items not easily available at home. South Florida's large Latin community has enhanced this attraction. Tourists from South America can shop in the area in their own language and in an atmosphere similar to that of their own countries.

The tourist industry is affected by a variety of economic factors, but the primary factor that determines expenditures on travel and vacations is income. Historically, about 6 percent of GNP has been spent on tourism. Travel and vacations, however, are luxury goods. During periods of slow economic growth people often cut back on travel and vacations to meet expenditure requirements on necessary goods and services. During the last decade two national recessions, in 1974-75 and 1980, slowed down the growth of out-of-state tourists coming to Florida. The decline in

visitors from outside of Florida was partially made up by an increase in the number of in-state vacations by residents. Florida residents impacted by the economic slowdown cancelled long vacation trips and opted for leisure activities closer to home. The overall impact, however, was a reduction in tourist generated expenditures, tax revenues and employment.

The Arab oil embargo also contributed to the reduced level of tourist activity experienced during 1974-75. Higher prices and cutbacks in gasoline availability kept many tourists at home, especially those who relied on auto travel. A similar impact was experienced in 1979, when the cutback of Iranian oil caused lines at the gas pumps and a further round of oil price increases.

Over the decade, the way tourists come to Florida has shifted substantially. At the beginning of the seventies, 23 percent came by air, while at decade's end this had increased to 36 percent. The bulk of this change occurred in two spurts; 1972-74 and 1978-80. Both periods experienced gas price and availability problems as well as a sluggish national economy. During both of these periods, automobile arrivals declined, while air traffic maintained and even increased its volume. In the subsequent recoveries, air travel retained its new market share. Some of this was undoubtedly occasioned by declining air fares caused by deregulation of the airline industry and the increase in

TABLE NINE
TOURIST ARRIVALS BY MODE OF TRAVEL
Average Annual Rate of Change

	1970-1975	1975-1980	1970-1980
	%	%	%
Total Tourist Arrivals	7.6	5.3	5.9
Air Tourist	11.9	10.2	11.2
Auto and Other Tourist	6.3	3.2	3.9

	1980-1985	1985-1990	1980-1990
	%	%	%
Total Tourist Arrivals	3.5	4.6	4.1
Air Tourist	6.2	6.3	6.2
Auto and Other Tourist	1.8	3.4	2.6

Source: Executive Office of the Governor and Department of Commerce.

international tourism. The shift in market shares between air and auto travel will continue but at a slower pace through the eighties. For the domestic, middle income family, however, the automobile will continue to be the predominant means of transportation for some time.

In addition to economic factors, tourism is also susceptible to vagaries of the weather. Severe weather, either in Florida or in the North, can have a significant impact on Florida tourism. Several periods of extreme cold weather hit Florida during early 1980, causing many visitors to either cancel their trips or to visit other, warmer areas. The impact of the cold weather lasted even after the temperature returned to normal levels because perceptions of a cold winter in South Florida persisted.

The outlook for the tourist industry in the eighties is optimistic. The prospect for the national economy is for relatively steady growth. Real per capita personal income is expected to grow 2.8 percent a year, providing a healthy base of potential vacationers. Although the dollar has shown recent strength, increasing costs for foreign tourists, it is unlikely that the growth trend of international tourists will be arrested in the near future. The declining value of foreign currencies will be compensated for by the increasing income of many of the foreign visitors.

The Florida tourist industry will remain susceptible to such factors as national economic slowdown and oil embargoes. The international tourists, however, will cushion the impact. A domestic recession will not discourage this group of tourists. Realizing this potential, the State is trying to encourage international tourism. Florida already operates international offices in Toronto, Canada and London, England. Others in Latin America are being planned.

FLORIDA'S ECONOMIC GROWTH AND THE ENVIRONMENT

The continued growth and development of Florida places a heavy strain on the State's environment and in particular on its most important resource--its water. Whether it is on the saline coastal waters which attract millions of tourists, highly diverse and productive estuaries which provide plentiful seafoods, the wetlands and coastal marshes which provide numerous services such as filtration of pollutants and sediments, the abundant fresh water lakes and streams, or the plentiful underground aquifers, future development will have a direct impact on this valuable resource. Potential problems which must be addressed include water quality, water use and availability and salt water intrusion into fresh drinking water supplies.

As land is changed from its original state to more intensive uses, especially urban forms, the associated water quality in the area tends to deteriorate. Each progression toward more intensive land use modifies the natural water system and disrupts the ongoing natural processes which protect and preserve water quality. While not all highly developed centers are predestined to poor water quality, it must be emphasized that as the intensity of land use increases, it becomes more important to manage our resources effectively.

As a peninsular state with more than 1,000 miles of coastline, Florida is blessed with large amounts of fresh and salt waters of high quality. Its bays are brimming with fish, its rivers and lakes contain and support an abundance of diverse aquatic life, and groundwater supplies are vast. More than any other state, however, Florida's resources are based on a highly fragile ecosystem.

The source of Florida's underground water wealth is the aquifer system that underlies the entire State. An aquifer is a rock layer, or set of layers, containing numerous porous spaces which allow water to pass through. The aquifer filters and stores potable water.

The State's principal aquifer is the Floridan; this aquifer is considered the most productive in the world. It supplies potable water to tens of thousands of industrial, commercial, agricultural and domestic wells in the State and also the municipal supplies for such urban areas as Tallahassee, Ocala, Jacksonville, Daytona Beach, Orlando, Gainesville, St. Petersburg and Cape Canaveral. In the southernmost portions of the State, the water content of the Floridan Aquifer is highly saline and non-potable. These areas derive their fresh water supplies from

other aquifers that overlay the Floridan. The primary one is the Biscayne Aquifer which supplies fresh water to the large urban sprawls of Broward and Dade Counties.

Major recharge to the aquifers occurs through rainfall in areas where it is at or near the surface or where numerous lakes, ponds and streams are hydraulically connected to the aquifers. The Floridan Aquifer is at or near ground surface in much of west-central and north-central Florida. Most of the Biscayne Aquifer is also at or near ground surface. Florida's wetlands (marshes and swamps) play an important role in the recharge process. The wetlands cleanse and store rainwater and run-off from other areas that then filters slowly into the aquifer. As development replaces wetlands, a great portion of the rainfall water that used to find its way into the aquifers is lost to run-off and evaporation.

The population and economic growth that has turned the wetlands of Florida into cities, farms and industrial developments has hampered the recharge potential of the aquifers, and at the same time increased the demand for fresh water. It has at times dangerously reduced the fresh water table of the aquifers. As the underground water table of the aquifer falls, salt water intrusion occurs, either from the saline water underlying the fresh water supply or from sea water, contaminating fresh water supplies.

Development also increases the chance of contamination from above ground sources. Population growth and industrialization increases the volume of municipal and industrial waste generated. The proper treatment and disposal of these wastes becomes a major task. The aquifers are highly susceptible to contamination by spillage, accidents or illegal dumping of wastes.

Unplanned development has already seriously altered our ecosystem, at times permanently impairing water cleansing and storage capability. In more recent years, care has been taken in order to minimize the negative impact of development on the environment. Florida developers no longer bulldoze sand dunes or dredge and fill swamp lands to make way for development. Raw sewage no longer flows into our rivers and bays. There is little doubt, however, that sustained economic growth will continue to strain our natural resources.

Environmental quality can be maintained but only at increasing costs. Taxes and user fees have to be levied to maintain and protect our natural resources. These high costs will ultimately slow down growth. As the State's cost of living rises, it will lose some of its advantage over other states as a desirable place to settle.

Water Use and Contamination

A major source of stress on our water resources will be the increase in water use demand brought about by continued economic growth and development. The problem is one of too many people using too much water, while at the same time, the total amount of available water is actually declining. In 1900, total water consumption in the United States was 40 billion gallons a day. Today it is 700 billion. By 2000, if population and water use continue to grow at their present projected rate, 1.5 trillion gallons per day will be used. This is 800 billion gallons more than the Nation's aquifers daily recharge rate. This indicates that the Nation's water supply is steadily declining. How much longer we can maintain the present rate is hard to determine. No accurate measure of underground water reservoirs currently exists. Until some are devised, the answer will be mainly speculative.

In the State of Florida, which has four of the Nation's fastest growing SMSA's, the rate of water withdrawal has become a major public concern. Table Ten shows fresh water demand by category estimated for Florida in 1975 and projections for 1985 and 2000. The table shows that the largest user of fresh water in Florida is the agricultural sector for irrigation. The electric utility's thermoelectric demand is the second largest, followed by public (municipal), industrial and rural-domestic use, in that order. The projections show a decline through time in industrial water use, probably due to increased reliance on water recycling. The projected increase in thermoelectric usage is of special environmental concern. The discharge of hot water into rivers and bays, after the cooling process is finished, significantly increases the temperature of the water and alters the marine ecosystem in ways not yet determined.

TABLE TEN
FRESH WATER USE IN FLORIDA

	1975		1985		2000	
	Water Use*	%	Water Use*	%	Water Use*	%
Public	1,283	16.6	1,791	18.6	2,397	19.7
Rural-domestic	298	3.8	377	3.9	552	4.5
Industrial	1,053	13.6	861	9.0	719	5.9
Irrigation	3,212	41.5	3,429	35.6	3,914	32.1
Thermoelectric	1,902	24.5	3,162	32.9	4,612	37.8
Total	7,749	100.0	9,620	100.0	12,194	100.0

*Thousands of Acreage feet.

Source: Bureau of Economic and Business Research, Univ. of Fla.

In spite of our massive fresh water resources, water availability problems will arise in Florida due to the uneven distribution of supply and demand across the State. Areas of high population growth are already experiencing water shortages. The southern third of the State is especially vulnerable to such shortages. Developers in south Florida have dredged and filled a large portion of the wetlands that originally covered the area. Rain water that used to be retained and filtered into the aquifer now is lost by runoffs into the ocean and by evaporation. The growing population has increased demand for fresh water use. The situation has become so acute that during periods of below-normal rainfall, water use for nonessential purposes has had to be restricted. The threat of salt water intrusion into the fresh water supply of the Biscayne Aquifer periodically becomes a major concern to south Floridians.

Even in the Floridan Aquifer, which has a high recharge rate, the fresh water level has been falling in areas of high withdrawal rates. These include the urban areas of Pensacola, Jacksonville and Orlando. In central Florida, the stress that the rapidly growing population places on the water supply is compounded by the demand for water of the phosphate mining industry. It is estimated that the phosphate industry uses 200 million gallons of water daily, almost four times as much as the City of Orlando.

The 1971 drought brought the water availability problem to the public attention. The Water Resource Act of 1972 was passed to protect the State's depleting water resource. It established a system by which anyone who wants to draw off Florida's water must obtain a permit to do so. The system is administered by five regional Water Management Districts. The goal is to make each district self-sufficient in the provision of water and to allocate the scarce water supply among competitive users in the most equitable and efficient fashion. The problems the Water Management Districts face are immense. Alternative sources of water supply, such as desalination or waste water reuse, are technically feasible. Their costs, however, are prohibitive. Unless conservation measures are adopted, the depletion of fresh water will ultimately lead to a limitation on growth.

Continued growth will strain Florida's fresh water supply, not only by placing an excess demand on the resource, but also by diminishing the quality of the supply. Greater growth and development increases actual and potential contamination, both from point source pollutants (where there is direct discharge into the water source and contaminants can be traced to a given polluter) and non-point source pollutants (where there is indirect contamination and the particular polluter responsible can not be easily traced). These non-point sources include:

- Construction site run-off carrying sediment, chemicals and debris;
- Urban stormwater which runs off buildings, streets and parking lots carrying with it oil, grease, lead, fertilizers and other pollutants;
- Effluent from septic tanks or landfills which may pollute surface or ground waters with coliform bacteria, viruses and nutrients;
- Agricultural run-off which carries sediment, fertilizers, pesticides and animal wastes;
- Spillage, accidents or improper treatment and/or disposal of industrial and municipal waste.

The risk of contamination from municipal and industrial waste is particularly affected by the increased urbanization and industrial growth, and threaten to become a major problem in Florida's future.

The growth in Florida's population, and the consequent increase in urbanization, has increased the demand for municipal sewage treatment and disposal facilities. Processes for municipal waste treatment may vary considerably, but they all involve the removal or reduction of pollutants from the influent streams. After treatment is completed, the waste stream is disposed of in ways that meet existing effluent standards. Disposal methods include spreading on or into the soil, discharge into the ocean, pumping underground or discharge to inland surface waters such as rivers and lakes. As more and more sewage is generated, the level of treatment must increase in order to maintain the same quality level in the water source where the treated sewage is discharged. If growth-induced increases in sewage exceed treatment plant capacity, an inadequately treated waste stream is discharged. Inadequate treatment increases unsafe disposal and the probability that pollutants may find their way into the water supply.

At the State level, by the year 2000, an increase of 1,367 million gallons of sewage per day will need to be treated. This will require an estimated 4,243 new treatment plants. Most of this increase will be the result of population growth. However, population growth is not solely responsible for the projected increase. Increased urbanization will bring sewage treatment to rural areas previously using septic tanks.

Industrial Waste

The treatment and disposal of industrial solid waste is another potential source of contamination. Although Florida is

not a highly industrialized state, the susceptibility of its underground water supply to contamination makes industrial waste disposal a major concern. Hazardous chemicals from industrial waste can easily leak into the aquifers if not disposed of properly. A recent listing of uncontrolled waste sites eligible for Federal clean-up money had Florida leading the country with 103 such sites. The primary characteristic of these Florida sites was the poor barrier to groundwater supplies. Industrial growth will increase the risk of such sites.

Employment in Florida's industrial sector grew at an average annual rate of 3.6 percent during the seventies and is expected to grow at a rate of 4.5 percent through 1990. In 1980, approximately 6.3 percent of all employees in the industrial sector were employed by industries that generate hazardous waste.

TABLE ELEVEN
HAZARDOUS WASTE GENERATION 1980-1990

1980 Estimate Metric Tons/Year	1981-85 Forecast Metric Tons/Year		1986-90 Forecast Metric Tons/Year	
128,794.4	1981	133,276.5	1986	157,587.6
	1982	137,914.5	1987	162,504.3
	1983	142,713.9	1988	167,574.4
	1984	147,680.3	1989	172,802.8
	1985	152,819.6	1990	178,194.2

Average Annual Growth Rate	
1981-85	1986-90
3.48%	3.12%

Source: Institute of Science and Public Affairs, Florida State University.

Some of the industries which generate hazardous waste in the State include the inorganic chemical, wood preserving, electroplating and polishing, industrial organic chemical and battery industries. In 1980, 129 thousand metric tons of hazardous waste were generated in the State. By 1990, this amount is estimated to increase to 178 thousand. Federal and state laws regulate the

treatment, storage and disposal of hazardous material. The cost of compliance for Florida's waste generators is probably higher than that faced by generators in other states. This is due to the fact that Florida is not geologically suited to the disposal of wastes. There are presently no licensed disposal sites in the State. For Florida's waste generators, the least cost alternative for complying with hazardous waste laws is out-of-state disposal. It has been estimated that Florida's industries have to transport an average of 650 miles for disposal. In 1978, the cost of compliance for Florida's waste generators was estimated to be an average of $342 per metric ton. By 1980, the estimated cost had increased by 60 percent, to an average of $547 per metric ton. The trend toward higher cost of disposal is likely to continue in the future. The only possibility for burial disposal facilities within the State might be some areas of north Florida. With the bulk of Florida's industries located in the central and southern portion of the State, transportation costs will continue to be high.

Impact of Environmental Deterioration on Growth

The deterioration of Florida's environment would have a significant negative effect on the State's growth and development. The impact would be felt primarily by those industries which depend heavily on our natural resources; there are secondary effects, however, which will result in lower income and economic well-being for the State as a whole. The industries directly affected include tourism and recreational and commercial fisheries.

Florida's tourist industry is strongly linked to abundant recreational opportunities in high quality lakes, rivers and coastal areas. Development has already taken its toll. The south Florida coastline has been transformed into an unbroken string of hotels and condominiums. Hillsborough Bay, the northeast portion of Tampa Bay, is so polluted that it is unsafe for swimming. The State's annual $1 billion fresh water recreational fishing industry is being destroyed piecemeal. Many of its lakes, once famous for their bass fishing, are now barren. The St. John's River is so polluted that during two separate incidents last year millions of fish floated dead to the surface.

The commercial fisheries have also suffered. The reduction and deterioriation of mangrove swamps and natural spawning grounds have caused the fish population to drop significantly. Shellfish grounds have disappeared or have been contaminated, leaving only 23 percent of those remaining safe for harvesting. Some parts of Apalachicola Bay, considered one of the cleanest in the State, are closed to shellfish harvesting a few times each year because of high bacterial levels. It is estimated that frequent oil spills along the St. Marks River and port facilities have resulted in

$238,000 per year of foregone recreational and commercial fisheries opportunities.

Because our available resources are limited, the State's population and economic growth will ultimately be constrained. In many areas of the State, population growth is already outstripping the local authorities' ability to properly treat sewage. In the fast growing Orlando area, for example, the State's environmental regulatory agency temporarily stopped new unit hookups to the city sewage facility until an agreement for reduction of sewage discharges was finally reached.

As more and more of our natural resources are depleted, alternatives will become available only at an increasing cost. Fresh drinking water can be obtained from salt water by desalination processes once fresh water sources are overtaxed, but at a significantly higher cost.

If the deteriorating environment discourages tourism and other key industries, it will ultimately mean higher taxes and living costs for Florida's citizens. This will erode the cost advantage Florida enjoys over other states and will reduce the incentive for people and industry to settle here. The more important consequence, however, will be the loss in the quality of life now experienced by Florida's residents.

The State's Effort in Protecting Florida's Environment

Recognizing the potential negative impact of growth and development on our environment and water resources, the State of Florida has taken steps to preserve environmental quality and encourage responsible growth. Some of the programs and laws enacted include:

- The State established regional Water Management Districts.
- In 1967, the Legislature enacted the Air and Water Pollution Control Act of 1967 that reduces air pollution and prohibits the careless dumping of raw municipal and industrial waste into our waterways and bays.
- The Environmental Land and Water Management Act was enacted to develop management strategies and policies to protect the environment.
- The Legislature passed the Beach and Shores Prevention Act, which effectively restricts construction along the coastal areas of Florida.

- The Local Government Comprehensive Planning Act was enacted in 1975 requiring long-range planning at the local level.

- The State Legislature passed the Florida Resources Recovery and Management Act to control the treatment, storage and disposal of industrial hazardous wastes.

- The Apalachicola Estuarine Sanctuary was created in order to protect the Apalachicola Bay and River system and its shellfishing industry.

- The entire Manatee River watershed was classified as a public drinking water supply to protect it from degradation. This river system is the major supply of potable water for the residents of Manatee and Sarasota Counties.

- State agencies are continuing to work with agricultural interests to assist them in the development of run-off erosion control programs.

- A State Water Policy has been adopted to guide water management decisions by the Department of Environmental Regulation and the Water Management Districts.

- The "Save our Rivers" program was enacted by the State Legislature in 1981. The program provides funds to the local water management districts for land acquisition to help water management, water supply conservation and the protection of water resources.

- The "Save our Coast" program was introduced by the Governor and Cabinet to develop new procedures for improving coordination of existing programs, in order to ensure enhanced protection of ecologically sensitive coastal areas. A major goal of this program is to purchase and protect valuable coastal areas.

The result of the State's programs is already evident. There have been improvements in water quality in the last two years in Escambia Bay and Hillsborough Bay as a result of reduced point and non-point discharge. Sewage discharges have been halted or reduced in many areas such as the Caloosahatchee River in Lee County and the St. Johns River in Jacksonville. The Department of Environmental Regulation and Orange County agreed on a reduction of sewage discharge, providing some protection and improvement of water quality in Shingle Creek-Lake Tahopekalega area.

The consideration of economic needs has been an integral part of the development of environmental programs. By law, agency

recommendations to increase the stringency of environmental regulation must be accompanied by analyses of the economic impact of the new regulations. Institutional arrangements are being developed to work toward achieving the proper balance between environmental and economic needs. This is perhaps the most basic function of the Interagency Management Committee directing the newly authorized Coastal Management Program. Recognizing the crucial economic importance of maintaining Florida's quality of life, the Governor and State Economic Development officials have targeted certain "environmentally clean" industries for recruitment into the State.

It is hoped that effective resource management and environmental protection will enable Florida to avoid the necessity of drastic, statewide growth curtailment policies and the adverse consequences for income and employment which may result.

The Effects of the Reagan Budget Cuts

The State's efforts to encourage responsible growth, however, may be hindered by the Federal budget cuts, resulting from the Reagan Administration's Economic Recovery Program. The budget cuts will particularly hurt programs for enforcement of environmental protection laws and programs that provide Federal funds for the construction of local infrastructures that sustain growth and development.

Although at the time this is being written, no final Federal appropriations for the present fiscal year have been enacted, a fairly accurate picture of the impact on some programs has emerged.

One program which is expected to be reduced and altered is the Construction Grants for Waste Water Treatment Works Program. The 1981 Federal fiscal year allocation to Florida grantees was $125 million. These funds were used for construction of municipal waste water treatment works, and included privately owned individual treatment systems if a municipality applied on behalf of such systems.

Funding for this program will be cut by $30 million in Federal fiscal year 1982, and funding for Federal fiscal year 1983 is now not expected to exceed the level of 1982. There was no funding provided for the municipal waste treatment grant program in the Administration's September, 1981 budget request. The Administration did propose that funding be requested upon the enactment of "cost cutting reforms" to the program. These reforms allow future Federal funding only to projects involving sewage treatment and interception sewer serving existing populations. The responsibility for new facilities needed to accommodate increases in population is now left up to the local governments.

As noted earlier, demand for sewage treatment service is growing in the State of Florida. This increase in demand is primarily due to the projected increase in the State's population. The reforms in the programs mean that a high percentage of the new facilities needed will become ineligible for Federal funding. Unless the state and local governments are willing and able to compensate for these reductions, it is likely that a number of the necessary facilities will not be constructed. The consequences will be constrained economic growth and/or reduced water quality.

Other programs which will feel the impact of the Federal budget cuts are those which provide enforcement of environmental laws. Federal funding for the Marine Mammal Protection Program, which provides financial assistance for the protection and management of marine mammals that inhabit the State's waters, is likely to be eliminated. The Solid and Hazardous Waste Management Support Grants have also been affected. Federal funds for this program in Federal fiscal year 1982 were eliminated. This reduction will necessitate a cutback in Florida's Department of Environmental Regulation's solid waste program staff by half. The permitting, enforcement, compliance inspection and technical assistance programs will be substantially reduced.

With the loss of funds, the state and local governments will be faced with serious resource allocation problems. Demand for services will not disappear along with the Federal funds to provide them. It will be difficult for the State of Florida to completely replace the Federal government as a source of funding because of the large across-the-board cuts in Federal funding. The State's total reduction in Federal funds for the biennium 1982-83 is estimated to be $900 million. In view of the disproportionate impact of these cuts on the social programs and the present public resistance to higher taxes, it is unlikely the State will be able to assume responsibility of funding all programs at previous levels. As a consequence of this situation, all levels of government will have to reevaluate the benefits from not only the endangered programs but the "safe" programs as well, with an eye toward funding only the most important ones. One important realization of this exercise is that growth is not a free good; it only looked that way in the past because the Federal government was paying for most of the infrastructure expansion --roads, sewers, airports, solid waste management--while the local areas received the benefits. The state and local governments will of necessity have to look more closely at the costs of acquiring all of growth's benefits. As a result, in some cases, growth may not be so exuberant and in others, those benefiting from the growth may be required to pay more of the costs.

The new Federal policy, if pursued aggressively, will operate to the disadvantage of the growth states which are still

building their infrastructure. The states will either have to pass on the cost of the infrastructure to their taxpayers and business community, or fail to accommodate growth. Either case will tend to erode the cost advantage now enjoyed by the growth states over the other states.

APPENDIX

Table		Page
1	Florida Personal Income by Major Source: 1971 - 1981...	52
2	Personal Income: Total, Per Capita and Real Per Capita Florida vs. United States and Southeast: 1971 - 1980...	54
3	Location Quotients by Broad Industrial Classification Florida: 1971 - 1980.....	55
4	Population, Florida vs. U.S.: 1970 - 1981.....	56
5	Florida Nonfarm Employment by Major Industry: 1971 - 1981.....	57
6	Unemployment Rate, Florida vs. U.S.: 1971 - 1981.....	58
7	Florida Taxable Sales by Category: 1971 - 1981.....	59
8	Florida Tourist Arrivals by Mode of Travel: 1971 - 1981	60
9	Florida Private Housing Starts and Construction Value: 1971 - 1981.....	61
10	Intergovernmental Revenue from Federal Government to State of Florida Per Capita: 1971 - 1980.....	62

TABLE A-1
FLORIDA PERSONAL INCOME BY MAJOR SOURCE: 1971 - 1981
(In Millions of Current Dollars)

Year	Total Personal Income	Total Wages and Salaries	Wages and Salaries							
			Private	Farm	Mining	Contract Construction	Manufacturing	Transportation, Communications, and Public Utilities	Wholesale and Retail Trade	Finance, Insurance and Real Estate
1971....	28,340	17,400	13,518	198	84	1,590	2,437	1,443	3,502	1,123
1972....	32,963	20,059	15,653	219	89	2,008	2,754	1,662	4,003	1,336
1973....	38,660	23,514	18,658	259	99	2,659	3,202	1,952	4,702	1,629
1974....	43,256	26,024	20,554	288	121	2,786	3,431	2,125	5,287	1,829
1975....	46,632	26,697	20,457	299	119	2,051	3,423	2,218	5,391	1,791
1976....	50,903	28,588	21,947	338	116	1,840	3,747	2,429	5,914	1,923
1977....	57,005	31,808	24,597	425	115	2,016	4,307	2,697	6,502	2,142
1978....	65,791	36,583	28,700	502	139	2,454	5,116	3,080	7,409	2,528
1979....	75,631	42,113	33,590	583	166	3,095	5,912	3,606	8,562	2,899
1980....	86,944	47,945	38,885	653	192	3,820	6,656	4,116	9,728	3,451
Year/Quarter										
1980 Q1	82,026	45,280	36,592	628	183	3,578	6,353	4,017	9,154	3,139
Q2	84,697	46,954	37,935	647	192	3,675	6,450	4,002	9,512	3,403
Q3	88,819	48,557	39,455	666	193	3,870	6,749	4,080	9,862	3,530
Q4	92,235	50,991	41,560	673	200	4,160	7,075	4,365	10,386	3,734
1981 Q1	95,308	52,562	42,971	683	204	4,405	7,183	4,421	10,813	3,930
Q2	98,288	54,212	44,329	703	215	4,479	7,397	4,558	11,077	4,034
Q3	102,402	56,210	45,966	716	224	4,487	7,857	4,652	11,499	4,106

TABLE A-1 (Continued)
FLORIDA PERSONAL INCOME BY MAJOR SOURCE: 1971 - 1981
(In Millions of Current Dollars)

Year	Wages and Salaries: Services	Wages and Salaries: Other	Wages and Salaries: Total Government	Other Labor Income	Proprietor's Income	Farm Proprietor's Income	Nonfarm Proprietor's Income	Property Income	Transfer Payments	Personal Contributions for Social Security
1971....	3,039	101	3,881	1,005	2,217	409	1,808	4,941	3,735	945
1972....	3,462	117	4,405	1,245	2,673	469	2,204	5,714	4,383	1,093
1973....	4,015	138	4,855	1,547	3,044	595	2,449	6,684	5,312	1,420
1974....	4,539	146	5,470	1,780	2,671	554	2,118	7,945	6,396	1,541
1975....	4,955	209	6,240	2,035	2,634	629	2,005	8,543	8,268	1,514
1976....	5,410	228	6,641	2,346	2,812	559	2,253	9,649	9,201	1,666
1977....	6,128	263	7,211	2,794	3,077	390	2,687	11,016	10,209	1,869
1978....	7,152	318	7,883	3,329	3,959	735	3,224	12,800	11,339	2,185
1979....	8,386	378	8,523	3,925	4,484	956	3,527	14,827	12,869	2,546
1980....	9,865	401	9,060	4,778	4,422	731	3,690	17,637	15,165	2,948
Year/Quarter										
1980 Q1	9,142	399	8,688	4,400	4,534	815	3,718	16,624	14,016	2,779
Q2	9,648	406	9,019	4,680	4,178	832	3,346	17,434	14,390	2,885
Q3	10,104	402	9,102	4,921	4,411	642	3,768	17,996	15,991	2,999
Q4	10,567	398	9,431	5,113	4,568	638	3,931	18,494	16,263	3,132
1981 Q1	10,892	442	9,591	5,254	4,739	755	3,983	19,611	16,706	3,500
Q2	11,427	439	9,883	5,465	4,773	801	3,972	20,497	16,989	3,579
Q3	11,983	440	10,244	5,670	4,657	698	3,959	21,508	18,126	3,696

NOTES: Annual income figures are computed from quarterly totals at annual rates.
Quarterly income figures are seasonally adjusted at annual rates.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

TABLE A-2

PERSONAL INCOME: TOTAL, PER CAPITA AND REAL PER CAPITA
FLORIDA vs. UNITED STATES AND SOUTHEAST: 1971 - 1980

	Total Personal Income (In Millions of Current Dollars)			Per Capita Personal Income (In Current Dollars)			Real Per Capita Personal Income*		
	U.S.	Florida	S.E.	U.S.	Florida	S.E.	U.S.	Florida	S.E.
1971	868,450	28,341	154,489	4,199	3,990	3,432	3,465	3,292	2,832
1972	951,350	32,964	174,173	4,546	4,357	3,785	3,628	3,477	3,021
1973	1,065,178	38,661	198,045	5,040	4,808	4,215	3,787	3,612	3,167
1974	1,168,600	43,256	220,801	5,478	5,117	4,604	3,709	3,464	3,117
1975	1,264,965	46,633	239,863	5,871	5,411	4,916	3,640	3,355	3,048
1976	1,391,200	50,904	267,115	6,394	5,821	5,395	3,750	3,414	3,164
1977	1,538,018	57,005	296,824	6,999	6,391	5,900	3,854	3,519	3,249
1978	1,721,743	65,791	336,909	7,752	7,185	6,592	3,963	3,673	3,370
1979	1,943,750	75,631	380,326	8,656	8,005	8,096	3,978	3,679	3,721
1980	2,160,225	86,944	424,557	9,537	8,921	8,064	3,864	3,615	3,267

* Deflated by the Consumer Price Index

Source: U.S. Department of Commerce, U.S. Department of Labor and the University of Florida.

TABLE A-3
LOCATION QUOTIENTS BY BROAD INDUSTRIAL CLASSIFICATION
FLORIDA: 1971 - 1980

Industry	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Farm	1.61	1.62	1.57	1.48	1.50	1.57	1.79	2.00	1.97	1.91
Nonfarm	1.00	1.00	1.00	1.00	1.00	1.00	.99	.99	.99	.99
Private	1.02	1.13	.99	.99	.97	.96	.96	.96	.97	.99
Manufacturing	.50	.49	.48	.47	.49	.49	.50	.52	.52	.53
Mining	.46	.42	.40	.40	.33	.30	.25	.26	.25	.23
Contract Construction	1.46	1.62	1.81	1.77	1.37	1.17	1.16	1.18	1.26	1.38
Wholesale and Retail Trade	1.20	1.20	1.21	1.21	1.19	1.22	1.21	1.20	1.20	1.20
Finance, Insurance and Real Estate	1.22	1.26	1.32	1.34	1.27	1.28	1.27	1.28	1.26	1.25
Transportation, Communications and Public Utilities	1.10	1.09	1.09	1.08	1.12	1.14	1.13	1.11	1.12	1.12
Services	1.31	1.28	1.26	1.25	1.26	1.27	1.27	1.27	1.26	1.25
Other Services	2.23	2.20	2.10	1.99	2.59	2.51	2.63	2.59	2.55	2.48
Government	1.07	1.05	1.01	1.03	1.10	1.13	1.13	1.11	1.09	1.03

NOTE: A Location Quotient = $\dfrac{\dfrac{\text{Florida Wage and Salary Income in an Industry}}{\text{Florida Total Wage and Salary Income}}}{\dfrac{\text{U.S. Wage and Salary Income in the Same Industry}}{\text{U.S. Total Wage and Salary Income}}}$

Source: Computed from data provided by the U.S. Department of Commerce, Bureau of Economic Analysis.

TABLE A-4

POPULATION, FLORIDA vs. U.S.: 1970 - 1981

Florida Regions

Region	1970*	1972	1973	1974	1975	1976	1977	1978	1979	1980*	1981
1	422,632	449,800	468,400	490,200	489,800	495,100	503,200	506,100	510,400	518,742	531,347
2	242,088	257,300	271,000	279,700	282,100	284,400	292,900	299,700	303,700	312,069	317,361
3	215,142	232,600	242,600	250,200	259,500	265,100	271,300	284,300	291,500	296,963	303,084
4	662,705	688,000	713,300	737,900	756,800	767,000	769,100	777,700	790,200	799,003	812,228
5	132,825	160,900	180,700	196,100	204,200	211,600	220,100	232,400	246,500	265,802	282,775
6	922,068	1,017,400	1,089,900	1,143,100	1,149,600	1,174,700	1,203,200	1,240,200	1,286,700	1,336,646	1,381,637
7	297,204	342,200	360,000	376,500	385,600	391,700	397,800	403,900	415,900	427,860	440,984
8	1,185,664	1,359,500	1,451,000	1,515,700	1,544,900	1,563,200	1,583,200	1,618,300	1,666,300	1,717,576	1,763,421
9	306,756	375,200	409,600	446,000	459,200	465,400	483,500	513,500	544,900	576,539	602,562
10	463,856	521,400	587,400	635,300	649,600	658,800	675,900	703,500	742,900	787,955	840,561
11	1,940,478	2,161,200	2,267,600	2,382,100	2,437,300	2,467,000	2,519,600	2,577,100	2,649,500	2,707,169	2,829,997
State	6,791,418	7,565,500	8,041,700	8,453,100	8,618,500	8,744,300	8,920,000	9,156,700	9,448,500	9,746,324	10,105,957
% Change	---	6.50	6.29	5.12	1.96	1.46	2.01	2.65	3.19	3.15	3.69

U.S.
(In Thousands)

Total	203,302	209,284	211,357	213,342	215,465	217,563	219,760	222,095	224,567	226,505	229,304
% Change	---	1.19	.99	.94	1.00	.97	1.01	1.06	1.11	.86	1.24

* April 1 Census figures.

NOTE: The United States' population for non-census years is a July 1 estimate. Florida's population for non-census years is an April 1 estimate.

Source: U.S. Department of Commerce and the University of Florida.

TABLE A-5
FLORIDA NONFARM EMPLOYMENT BY MAJOR INDUSTRY: 1971 - 1981
(In Thousands of Employees)

Year	Total Nonfarm	Mining	Construction	Manufacturing	Transportation, Communications, and Public Utilities	Wholesale and Retail Trade	Finance, Insurance and Real Estate	Services	Total Government
1971....	2,276.2	8.9	186.7	322.6	161.7	583.4	143.7	449.9	419.2
1972....	2,513.0	8.9	229.9	351.2	173.6	643.3	162.4	505.6	437.8
1973....	2,778.6	9.3	289.9	380.5	186.8	703.1	182.6	556.2	470.1
1974....	2,864.0	9.9	276.3	375.9	189.8	727.7	192.5	581.5	510.6
1975....	2,746.3	9.3	182.7	339.4	182.9	713.7	188.4	584.2	546.0
1976....	2,784.6	8.8	166.8	354.0	181.4	731.0	191.3	608.5	542.9
1977....	2,933.8	9.1	179.0	381.0	185.0	771.2	202.5	640.1	565.9
1978....	3,181.2	9.5	209.5	415.6	194.1	837.2	219.3	694.1	601.9
1979....	3,380.8	10.2	241.3	443.6	208.4	889.3	235.0	752.5	600.3
1980....	3,576.3	11.0	263.9	456.4	220.8	939.9	254.2	811.4	618.8
1981....	3,722.2	11.2	282.5	466.6	228.6	983.2	271.9	863.7	614.5
Year/Quarter									
1980 Q1	3,520.8	10.5	262.9	458.3	217.0	922.4	248.3	792.5	609.8
Q2	3,550.4	10.7	258.8	454.6	218.9	931.2	250.3	804.0	621.4
Q3	3,596.1	11.2	263.4	454.3	222.0	947.3	256.1	818.3	622.5
Q4	3,637.9	11.6	270.5	458.3	225.1	958.7	262.1	830.7	621.6
1981 Q1	3,669.8	11.3	278.2	460.7	226.0	967.7	267.3	838.7	621.0
Q2	3,709.9	11.4	283.0	465.7	229.0	980.1	271.4	852.0	617.5
Q3	3,740.6	11.1	285.3	472.1	229.5	989.1	272.7	869.6	608.7
Q4	3,768.7	10.9	283.5	468.0	229.9	995.9	276.2	894.6	611.0

NOTE: Quarterly data are seasonally adjusted.

Source: Computed from data provided by the Florida Department of Labor and Employment Security.

TABLE A-6
UNEMPLOYMENT RATE, FLORIDA vs. U.S.: 1971 - 1981
(Annual Average Rate)

Year	Total Civilian Employment (In Thousands)		Unemployment Rate (Percent)	
	Florida	U.S.	Florida	U.S.
1971....	2,763.4	83,856.5	4.9	6.0
1972....	2,860.9	86,519.5	5.1	5.6
1973....	3,089.7	88,693.8	4.3	4.9
1974....	3,306.6	91,038.3	6.3	5.6
1975....	3,417.5	92,620.3	10.7	8.5
1976....	3,441.9	94,744.0	9.0	7.7
1977....	3,522.8	97,394.0	8.2	7.0
1978....	3,711.2	100,403.0	6.6	6.0
1979....	3,835.2	102,912.8	6.0	5.8
1980....	3,925.3	104,766.3	5.9	7.2
1981....	4,102.5	106,451.8	6.8	7.6
Year/Quarter				
1980 Q1	3,850.7	104,217.0	5.4	6.2
Q2	3,929.5	104,693.0	6.0	7.3
Q3	3,917.4	104,982.0	6.7	7.5
Q4	4,003.7	105,173.0	5.8	7.5
1981 Q1	3,989.6	105,800.0	6.6	7.3
Q2	4,077.5	106,768.0	6.6	7.4
Q3	4,138.3	106,434.0	6.5	7.2
Q4	4,204.7	106,805.0	7.5	8.4

NOTE: The Florida quarterly data are seasonally adjusted by the Executive Office of the Governor. A more detailed discussion of the methodology used for determining unemployment rates is found in the 1977 Economic Report of the Governor, page 87.

Source: U.S. Department of Commerce, Florida Department of Labor and Employment Security and the Executive Office of the Governor.

TABLE A-7
FLORIDA TAXABLE SALES BY CATEGORY: 1971 - 1981
(In Millions of Current Dollars--Seasonally Adjusted at Annual Rates)

	Consumption				Investment	
	Nondurable		Durable			
Year	Consumer	Recreation	Autos And Accessories	Other	Building	Business
1971....	7,021.2	3,770.5	3,651.9	1,328.7	1,965.9	3,221.4
1972....	7,297.7	4,254.0	4,543.1	1,633.5	2,652.1	4,311.4
1973....	8,215.4	4,895.6	5,712.4	2,034.7	3,568.5	5,408.8
1974....	9,312.9	5,329.7	5,193.1	2,094.2	3,628.2	6,207.8
1975....	9,867.1	5,820.8	4,868.3	1,933.7	2,665.8	6,198.2
1976....	10,843.2	6,455.9	5,878.2	2,221.4	2,719.6	6,250.5
1977....	11,659.4	7,239.5	6,854.7	2,368.3	3,321.9	6,979.6
1978....	13,613.3	8,574.0	8,502.6	2,923.8	4,347.7	8,282.3
1979....	15,548.6	9,954.0	9,601.4	3,501.2	5,370.8	9,949.0
1980....	18,035.5	11,543.8	10,230.8	3,977.0	6,134.3	12,205.6
1981....	21,066.3	13,040.6	11,455.5	4,539.9	6,735.1	14,723.6
Year/Quarter						
1980 Q1	17,184.4	11,115.9	10,448.1	3,997.3	6,203.4	11,864.3
Q2	17,337.7	11,166.1	9,741.0	3,813.4	6,018.1	11,892.2
Q3	18,357.8	11,650.5	9,999.1	3,911.8	6,035.1	11,587.1
Q4	19,262.0	12,242.9	10,735.0	4,185.5	6,280.7	13,478.7
1981 Q1	19,275.3	12,189.2	11,018.7	4,284.8	6,655.7	13,845.7
Q2	21,664.7	12,892.9	11,693.5	4,396.8	7,086.9	14,807.3
Q3	21,194.3	13,625.4	11,729.0	5,162.9	6,977.7	15,629.7
Q4	22,130.9	13,454.7	11,380.6	4,315.0	6,220.0	14,611.6

Source: Computed from data provided by the Florida Department of Revenue.

TABLE A-8
FLORIDA TOURIST ARRIVALS BY MODE OF TRAVEL: 1971 - 1981
(In Thousands--Seasonally Adjusted at Annual Rates)

Year	Airplane	Automobile	Total
1971....	5,033	15,705	20,738
1972....	6,007	16,659	22,667
1973....	6,582	18,201	24,784
1974....	6,877	17,299	24,177
1975....	7,365	19,379	26,744
1976....	7,996	20,914	28,911
1977....	8,564	20,582	29,147
1978....	10,374	22,112	32,487
1979....	12,080	20,843	32,924
1980....	11,845	20,592	32,438
1981....	11,246	21,471	32,717
Year/Quarter			
1980 Q1	12,235	21,152	33,388
Q2	11,908	20,348	32,257
Q3	11,782	21,065	32,847
Q4	11,457	19,803	31,261
1981 Q1	10,628	18,849	29,477
Q2	11,779	22,132	33,911
Q3	11,037	21,623	32,660
Q4	11,539	23,281	34,820

Source: Florida Department of Commerce, Division of Tourism.

TABLE A-9
FLORIDA PRIVATE HOUSING STARTS AND CONSTRUCTION VALUE: 1971 - 1981
(Seasonally Adjusted at Annual Rates)

Year	Housing Starts		Construction Value(In Thousands of Current Dollars)				
			Private Residential				
	Single-Family	Multi-Family	Single-Family	Multi-Family	Other Private	Public	Total
1971....	62,846	85,573	1,217,290	1,146,879	1,131,684	760,989	4,236,619
1972....	78,456	170,217	1,698,653	2,601,517	1,570,557	711,644	6,584,157
1973....	63,991	204,156	1,597,027	3,592,322	1,814,732	983,397	7,954,305
1974....	42,221	91,079	1,142,190	1,907,905	1,288,555	1,367,997	5,664,299
1975....	34,826	17,773	1,045,082	356,940	1,117,566	1,107,443	3,639,705
1976....	47,983	18,989	1,559,103	386,789	944,223	1,276,746	4,166,456
1977....	75,015	34,985	2,613,484	854,957	1,991,829	1,422,581	6,793,578
1978....	95,121	65,358	3,539,560	1,787,032	2,222,983	1,510,594	9,050,891
1979....	95,752	97,276	3,894,380	3,068,207	3,103,680	2,141,239	12,141,511
1980....	83,618	91,236	3,688,662	3,347,343	3,713,994	2,126,888	13,019,200
1981....	66,527	76,617	3,321,671	3,074,321	3,425,023	2,359,034	12,110,458
Year/Quarter							
1980 Q1	84,983	98,594	3,593,415	3,532,085	2,410,407	2,725,335	12,690,588
Q2	65,209	74,868	2,790,396	2,865,756	2,624,300	1,652,501	9,651,237
Q3	88,464	84,033	3,906,032	3,174,106	6,503,458	2,225,500	15,662,358
Q4	95,817	107,449	4,464,805	3,817,425	3,317,810	1,904,216	14,072,619
1981 Q1	85,029	93,383	4,185,896	3,584,327	3,431,507	2,182,315	13,350,340
Q2	78,923	81,961	3,942,367	3,374,516	3,781,113	2,635,015	13,205,416
Q3	57,202	72,342	2,856,654	3,065,525	2,999,081	1,991,534	11,097,242
Q4	44,954	58,781	2,301,767	2,272,918	3,488,393	2,627,272	10,790,833

NOTE: Private residential construction includes all housekeeping residential buildings owned by the private sector. This includes both multi-family (two or more dwelling units) and single-family construction.

Other private construction includes all non-housekeeping construction owned by the private sector and is made up of manufacturing and non-manufacturing. Non-manufacturing construction is further broker down into building and non-building. Public construction includes all projects that are owned by a governmental entity. It is divided into the eight categories of residential, schools, transportation, water and sewerage, other building (local and state/federal) and other non-building (local and state/federal).

TABLE A-10

INTERGOVERNMENTAL REVENUE FROM FEDERAL GOVERNMENT TO STATE OF FLORIDA
PER CAPITA: 1971 - 1980
(In Current Dollars)

	Total*		Education		Highways		Public Welfare		General Revenue Sharing		Employment Security Administration	
Year	Florida	50 State Average	Florida	50 State Average	Florida	50 State Average	Florida	50 State Average	Florida	50 State Average	Florida	50 State Average
1971	70.04	110.72	22.23	26.61	13.24	23.43	25.96	46.48	---	---	2.10	4.67
1972	85.70	129.12	24.42	28.84	18.13	23.48	31.99	59.23	---	---	2.52	5.23
1973	96.75	149.94	25.60	30.75	13.71	22.23	36.70	65.29	8.05	10.83	3.28	6.10
1974	94.04	150.15	25.03	31.90	19.46	21.38	27.86	63.23	7.23	9.71	4.13	6.15
1975	118.61	170.18	29.54	37.10	19.49	24.77	30.54	67.08	7.50	9.72	4.20	7.16
1976	122.28	196.36	33.83	40.48	18.37	29.27	32.20	78.83	7.85	9.83	5.37	7.75
1977	133.32	212.03	35.93	41.90	21.10	29.51	35.35	86.82	7.94	10.51	6.75	8.50
1978	157.11	230.92	36.87	45.17	36.18	28.99	34.07	92.03	7.94	10.37	6.81	8.68
1979	159.59	248.58	40.31	48.80	29.48	31.97	41.16	101.68	7.65	10.30	5.80	8.78
1980	178.88	274.02	44.30	56.52	43.25	39.23	43.34	109.27	7.01	10.08	6.33	9.08

* Including amounts for categories not shown separately.

Source: U.S. Department of Commerce, Bureau of the Census, State Government Finances, selected years.